

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad]

No. 2304.—Vol. XLIX.

LONDON, SATURDAY, OCTOBER 18, 1879.

[WITH SUPPLEMENT.] PRICE SIXPENCE. PER ANNUM, BY POST, £1 4s.

MR JAMES H. CROFTS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

MINES INSPECTED.
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—
35 Clementina, 20 Herodfoot, £2 12s 9d 100 Parys Corporat., 15s 6d
25 Colorado, £1 1/2, 100 Javali, 7s, 100 Penrith, 1s. 6d.
20 Devon Consols, £5 3s 9d 50 Killfret, 15s. call pd 20 Richmond, £2.
5 East Lovell, £2 1/2, 25 Leadhills, £4 1/2, 20 Tankerville, £2 1/2.
25 East Van, £2 1/2, 5 Llanidloes, 10s, 25 West Asheton, 25s 9d
25 Eberhardt, £2 1/2, 35 Morla Du, 16s, 25 Wye Valley, 20s.
50 Flagstaff, £2 1/2, 50 Pandora, 15s, 20 West Chiverton.
50 Frontino, £2 1/2, 100 Pestarena, 4s. 6d, 20 Wheel Oreb, £25 2s 6d.

SPECIAL BUSINESS at close prices in TIN Shares—Carn Brea, Cook's Kitchen, Dolcoath, East Lovell, South Condurrow, South Frances, Tincroft, West Frances, West Peavor, Wheel Bassett, Grenville, Jane, Kitty, Peavor, and others.

* * * SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

RAILWAYS—SPECIAL BUSINESS.

FOREIGN BONDS—SPECIAL BUSINESS.

Fortnightly accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.

RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS.

TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement

A Stock and Share List free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—
50 Almada, 6s. 6d, 70 Flagstaff, 9s. 6d, 20 New Quebrada, £2 12s 9d
25 Blue Tent, £2, 30 Frontino, £2 12s 9d, 50 Nouveau Monde.
75 Bodidris, 50 Gold Run, 3s. 6d, 100 Port Phillip, 9s. 9d.
5 Cape Copper, £31, 20 Great Holway, 50 Parys Copper, 15s.
40 Canada Gold, 5 Great Laxey, £18 1/2, 50 Roman Grav., £12 1/2.
2 Carn Brea, £25, 50 Glenroy, 11s. 6d, 20 Richmond.
50 Colorado, 31s. 6d, 25 Gawton, 15 South Frances, £2 1/2.
100 Chontales, 40 Hington Down, 9s. 6d, 30 South Darren.
60 Don Pedro, 13s. 6d, 50 Herodfoot, £2 1/2, 50 Tamar Silver-Lead.
25 Devon Consols, £5 1/2, 50 Javali, 7s. 6d, 10 Tankerville, £2 1/2.
3 Dolcoath, £50 1/2, 100 Killfret, 15s, 15 Wheel Grenville, £25 1/2.
5 East Pool, 20 Leadhills, £4 1/2, 5 Wheel Jane, £5.
10 East Lovell, £2 1/2, 50 Morla Du, 16s, 10 Wheel Peavor.
50 East Caradon, 25s. 6d, 25 Mellanear, £3 1/2, 100 Yorke Peninsula.
20 East Van, £2 11s. 3d, 100 Morla Du, 16s, 25 North D'Eresby.

IMPORTANT TO INVESTORS.

THE RISE IN TIN AND COPPER.

SOUND INVESTMENTS IN HOME MINES.

Those who have followed my advice during the past two months (and for some time previously) may already realise good profits; but with the revival of Trade generally, and the greatly improved position and prospects of the Metal Markets, there is ample room for a further rise in SOUND TIN and COPPER SHARES. A judicious purchase of these at present prices cannot fail to produce very remunerative results within a comparatively short period. Shares in SOUND LEAD MINES are also worth buying.

A Selected List free to bona fide investors.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

A complete and reliable List of all the Leading Investments (published on the first of each month) may be obtained free on application to—

WILLIAM HENRY BUMPUS, SWORN BROKER.

OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.

BANKERS: THE NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

MESSRS. JONES AND HOUSTON, 25, CROSBY HALL,
CHAMBERS, LONDON, E.C.

STOCK AND SHARE DEALERS, AND GENERAL MINING AGENTS.

Can, without prejudice, recommend to their clients and investors in general the purchase of Shares in the following properties:—

BYRN GLAS, DON PEDRO, RHYDALUN, BENTIN, VAN.

BYRN GLAS.—These shares should be secured at once. This mine will no doubt prove a second Van. Many hundred fathoms of ore ground have been opened up, which can be extracted at a handsome profit. We shall be pleased to supply full and exhaustive information to intending investors.

BANKERS: LONDON AND PROVINCIAL.

MR. E. J. BARTLETT, BRITISH AND FOREIGN STOCK
AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C.
SPECIAL BUSINESS IN EAST LOVELL SHARES.

JUST OUT.

"HOW TO INVEST," post free, One Shilling, Thirteenth Edition, enlarged.

MR. JOHN RISLEY, STOCK AND SHARE BROKER,
38, CORNHILL, LONDON, E.C.
ESTABLISHED 20 YEARS.

Reliable information on all Mines obtained for clients.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
9, GRACECHURCH STREET, LONDON, E.C. (Established 26 years).
ALL BUSINESS TRANSACTED FREE OF ANY CHARGE FOR COMMISSION.

Notice to Investors and Speculators.

Mr. Budge has SPECIAL DEALINGS in—
100 Bedford United, 9s, 180 Gold Run, 3s. 3d, 100 Tamar Silver-lead.
100 Bodidris, 60 Killfret, 17s. 6d, 40 Tankerville, £2 1/2.
4 Carn Brea, £27, 30 Leadhills, £4 1/2, 5 Tincroft, £16 1/2.
85 Chapel House, 120 North D'Eresby, 20s, 20 Van, £22.
50 Canada Gold, 100 Marke Valley, 24s. 9d, 100 West Asheton, 27s. 6d.
40 Devonport and Tiver- 80 Kapanga, 5s. 6d, 35 Wheel Oreb, £25 1/2.
ton Brewery, 130 Parys Copper, 15s. 6d, 35 Wheel Kitty.
3 Dolcoath, £50, 85 Pandora, 16s. 9d, 35 Wheel Grenville, £25 1/2.
100 East Oreb, 25s. 9d, 30 Penballs, 25 Roman Gravels, £12 1/2.
90 East Caradon, 10 Roman Gravels, £12 1/2, 25 Wheel Jane, £4 1/2.
40 East Van, £2 11s. 3d, 50 South Frances, £10, 20 Wheel Uny.
50 Gawton, 17s. 6d, 50 South Darren, 20 Wheel Bassett, £10.

BUYERS or SELLERS of any of the above, or holders of any Stocks or Shares not readily marketable, will do well to apply to Mr. Budge.

BRITISH AND FOREIGN MINES

SHAREHOLDERS and INVESTORS desirous of PURCHASING or SELLING SHARES in COPPER, TIN, LEAD, GOLD, or SILVER MINES can do so at market prices, and obtain information regarding the same on personal application, or by letter, of—

Messrs. PETER WATSON AND CO.,

54, OLD BROAD STREET, LONDON, E.C.

Telegraphic Messages punctually attended to.

MR. ALFRED E. COOK,
74, OLD BROAD STREET, LONDON.
ESTABLISHED 1853.

Investors following Mr. COOK'S advice have made LARGE SUMS OF MONEY. LOW PRICED LEAD SHARES should NOW be PURCHASED. Lead will probably advance many pounds per ton. There is no cheaper LEAD SHARE to be bought than

NORTH D'ERESBY MOUNTAIN, at 20s. fully paid.

Every Inspector reports well of the Mine, and the price will no doubt be much higher in a very short time. MINIMUM of risk, with almost CERTAINTY of good profit.

SPECIAL BUSINESS in ALL TIN and COPPER SHARES at CLOSEST POSSIBLE PRICES.

SPECIAL.—The ATTENTION OF INVESTORS is respectfully directed to "INVESTMENT NOTES," by Mr. ALFRED E. COOK, in the Mining Journal. Any of the shares recommended, and ALL MARKETABLE SHARES, can be supplied at closest current prices, and on BETTER TERMS than those PUBLICLY ADVERTISED. The highest price is also given to Sellers. Telegrams command immediate attention, Mr. COOK'S offices being much closer to both the Stock Exchange and Mining Market than those of any other Dealer or Broker.

74, OLD BROAD STREET, LONDON.

(Adjoining the Stock Exchange and Mining Markets.)

STOCKS AND SHARES,
FOREIGN BONDS, TELEGRAPHS, TRAMWAYS, RAILWAYS, AND
OTHER LEADING SECURITIES.

MR. JAMES STOCKER, STOCKBROKER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1848.

SPECIAL BUSINESS in the following:—

Carn Brea	Flagstaff	South Frances
Cook's Kitchen	Frontino	Santa Barbara
Cape Copper	Gawton	Tankerville
Colorado	Herodfoot	Tincroft
Chontales	Hultafall	Van
Devon Consols	Killfret	West Asheton
Dolcoath	Leadhills	West Chiverton
Don Pedro	East Chance	West W. Frances
East Lovell	Marke Valley	West Peavor
East Van	Pandora	Wheel Kitty
East Caradon	Pateley Bridge	Wheel Peavor
East Oreb	Roman Gravels	Wheel Grenville
Eberhardt	Richmond	Wheel Uny

BANKERS: LONDON AND WESTMINSTER.

FERDINAND R. KIRK, 5, BIRCHIN LANE,
LONDON, E.C.

Fortnightly ACCOUNTS opened, on receipt of the usual "cover," in Railways Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.

"THE WEEK."—A SEPARATE EDITION from that which appears in the Mining Journal is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

MESSRS. J. TAYLOR AND CO.,
MINING ENGINEERS AND INSPECTORS,
86, LONDON WALL, LONDON, E.C.,
Have Agents in England, Scotland, Wales, and on the Continent.

MESSRS. EKINS AND CO.,
STOCK AND SHARE DEALERS,
14, QUEEN VICTORIA STREET, LONDON, E.C.
BANKERS: METROPOLITAN.

MR. THOMAS THOMPSON, JUN., STOCK BROKER,
18, ST. SWITHIN'S LANE, E.C.

Mr. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.

Mr. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 4 to 10 per cent. dividends upon present prices.

Mr. THOMPSON'S weekly Circular may be had on application.

MR. JOHN BATTERS, STOCK AND SHARE DEALER,
transacts Business in Stock Exchange and Mining Securities.
Special information to Investors in Lead Mines, also in Swedish, Canadian, and other securities.
4, AUSTINFRIARS, LONDON, E.C.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
37, WALBROOK, LONDON, E.C.

ESTABLISHED 20 YEARS.—BANKERS: LONDON AND SOUTH-WESTERN.
References in any part of the kingdom. A deposit required with orders or offers to be returned in full if no business. Time bargains not entertained.

Terms—Cash.
Confidential enquiries quickly answered. Telegrams promptly attended to. Close prices and accurate intelligence may be relied upon.

FOR SALE—

5 Dolcoath	30 Devon Great Consols	25 Oreb
10 Cook's Kitchen	50 Wheel Uny	20 West Peavor
3 Carn Brea	25 Mellanear	5 South Frances
10 South Condurrow	25 South Crofty	25 East Caradon
5 East Pool	5 Great Laxey	5 Van

MR. T. E. W. THOMAS, STOCK AND SHARE DEALER,
3, GREAT WINCHESTER STREET, E.C.

The following are prices at which business can be done:—

Buyers.	Sellers.	Buyers.	Sellers.
Chapel House Colliery, £1 1/2	£1 1/2	New Quebrada, £2 1/2	£2 1/2
Dolcoath, 49	£21	Parys Corporation, 14s. 6d.	14s.
Don Pedro, 11s.	12s.	Tankerville, 6s.	6s.
East Caradon, 15s.	15s.	Tincroft, 16	17
East Lovell, 2s.	3	West Peavor, 5	5 1/2
East Van, 2	2 1/2	Wheel Oreb, 4s.	4s.
Herodfoot, 2s.	2 1/2	Wheel Grenville, 5s.	5 1/2
Leadhills, 3s.	4s.	Wheel Peavor, 17	18
Marke Valley, 1s.	1 1/2	Wheel Uny, 2	2 1/2

TINCROFT, WHEEL GRENVILLE, and EAST LOVELL recommended.

Friday Evening, October 17, 1879.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C.

Can SELL the following SHARES at prices annexed:—

50 Bedford United, 9s. 6d	25 Leadhills, £4.	75 Tamar Silver-Lead.
75 Don Pedro, 13s. 6d.	20 Marke Valley, 26s. 3d.	50 Victoria (London)
East Caradon, 26s. 6d.	50 Morla Du, 14s. 3d.	Mining Company
25 East Oreb, 30s.	20 N. Quebrada, £3 1s.	15 West Chiverton, £5 1/2
East Van, £2 1/2	25 Pateley Bridge, 17s.	25 West Holway, £1 1/2
Eberhardt, £2 10s.	100 Pestarena, 4s. 6d.	10 Wh. Kitty (St. Agnes), £2 1/2
50 Flagstaff, £2 8s. 9d.	100 Port Phillip, 9s. 6d.	50 Yorke Peninsula (pref) 18s. 3d.
30 Gawton Copper, 16s.	10 Richmond, £3 15s.	
20 Great Holway.	200 Rossa Grande, 2s. 6d.	
40 Hington, 10s.	35 South Darren.	
	10 South Frances, £2 1/2.	

THE "DIFFERENTIAL" PUMPING ENGINE
(DAVEY'S PATENT),

FOR
DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,
SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL
PUMPING PURPOSES

HATHORN, DAVEY, AND CO.,
LEEDS.

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all sizes, from 5 to 500-horse power, and have facilities for supplying very powerful Engines and Pumps at a short notice.

See Illustrated Advertisement every alternate week.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER,
10, COLEMAN STREET, LONDON, E.C.

"HOW TO TAKE ADVANTAGE OF THE COMING RISE IN PRICES,"
By ALFRED THOMAS, 10, Coleman-street, E.C.
Will be forwarded to Investors upon application.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

TO INVESTORS, SHAREHOLDERS, TRUSTEES.
SAFE DIVIDEND INVESTMENTS PAYING 4 TO 6 AND 10 PER CENT.
PER ANNUM ON PRESENT OUTLAY.

SHARP'S INVESTMENT CIRCULAR.
The OCTOBER EDITION (post free),
SHOULD BE CONSULTED BY INVESTORS AND SHAREHOLDERS.

It is a Reliable "Guide," giving valuable information and Sound Advice, &c. It gives Market prices; Dividends upon outlay, when payable; Reports, &c., &c. IT CONTAINS ALL THE SAFE INVESTMENTS IN THE FOLLOWING:—

English, Foreign Railways.	Insurance, Gas, Waterworks.
Preference, Debenture Stocks.	Colonial, Foreign Stocks.
Indian, American Stocks.	British, Foreign, Colonial Mines.
Bank, Financial Shares.	Ten, Land Shares.
Tramway, Telegraph Shares.	Shipping, Dock Shares.
Municipal Bonds.	Miscellaneous Shares, &c., &c.

HENRY GOULD SHARP, STOCK AND SHARE BROKER,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.

BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

MESSRS. ENDEAN AND CO., STOCK AND SHARE
DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.

THE OREBOR DISTRICT.—Having our own independent agents we can furnish reliable information respecting mining properties in this neighbourhood on our usual terms.

TAMAR MINE.—This mine is in the same district as Oreb, and shares should be bought at present low price.

BODIDRIS MINE.—Splendid specimens of ore from the Mass-y-pwill lode, just received, may be seen at our office.

Full particulars on application to—
Messrs. ENDEAN and CO., 85, GRACECHURCH STREET, LONDON, E.C.

MESSRS. ENDEAN AND CO. strongly recommend
SOUTH WHEEL OREBOR for a GREAT RISE in PRICE. They recommended Wheel Oreb at £2 10s. in this Journal less than three months since. No time should be lost in buying SOUTH WHEEL OREBOR at £1.

Prompt application should be made to—
Messrs. ENDEAN and CO., STOCK AND SHARE DEALERS,
85, GRACECHURCH STREET, LONDON, E.C.

ESTABLISHED 1861.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

CAPITALISTS SHOULD LOSE NO TIME in SECURING an
INTEREST in the CANADA GOLD COMPANY, now that the works are under the superintendence of Mr. Gordon, who has had 20 years' experience of Gold Mining in Brazil, and who made the St. John del Rey Gold Mining Company the most successful and profitable Gold Company in the London market.

Returns of gold are already being made, and as the works are developed there is a certainty of early dividends.

Wm. Clarke, Esq., of Melbourne, who first discovered the existence of gold in Australia, states as follows, viz.:—"I can assure you that there is no field in Australia at the present time open which bears the same good prospect for alluvial gold, and as all the small watercourses are found to contain gold in some quantity, there is an absolute certainty of a rich deep lead in the Valley of the Gilbert. If we had so good a prospect in Victoria, there would be what we call a 'rush' to the ground of about 10,000 men in a week; every claim of likely appearance would be staked out, and each would have a market value amounting to many hundreds of thousands of pounds for the area you have."

Applications for further reports and particulars should be made at once to Mr. JOHN R. PIKE, Stock and Share Dealer, Crown Chambers, Threadneedle-street, London, E.C.

TO BE SOLD, the LEASE of a LEAD MINE in
RADNORSHIRE, with PLANT and MACHINERY, complete. Nominal dead rent and small royalty.
For particulars, apply to T. M. HARVEY, 6, Old Jewry, London, E.C.

FOR SALE, a FIRST-CLASS SECOND-HAND 80 in. CORNISH
PUMPING ENGINE, with several 11 ton BOILERS.
Apply, WM. BERNETT, Roake, Camborne.

FOR SALE:—
100 Bettws-y-Coed, 2 D'Eresby Mountain, £30 50 Pandora, 12s. 6d.
£1 1s. 50 Bwlch Consol., £1. 50 Parys Corporation, 15s.

SPECIAL BUSINESS in Dolcoath, Peavor, West Peavor, Van, East Van, Roman Gravels, Tankerville, Don Pedro, Richmond, Hornachos, and Llanes.
Address, H. WILKINS, 3, Heybourne Villas, Tottenham.

MR. JOHN L. M. FRASER
(Fourteen Years at the Great Miners' Mines)
CONSULTING MINING ENGINEER—SECRETARY AND AUDITOR—
ROYALTY AND MINERAL ESTATE AGENT—SHARE DEALER—
MINES, MINERALS, AND MACHINERY BROKER—
GREENFIELD HOUSE, WREXHAM.

Is in a position to obtain valuable Mineral Sets on easy terms, and can introduce properties that, with a small additional outlay, will realise handsome profits. Mines Inspected, Managed, and Surveyed at moderate charges.

Every description of Machinery at the lowest possible prices.

ON SALE—10 Per Cent. Preference Shares in a first-class Lead Mine. Full particulars on application.

MR. DAVID COWAN,
CONSULTING MINING AND MECHANICAL ENGINEER,
AND LICENSED VALUATOR,
58, RENFIELD STREET, GLASGOW.

Investigations, Reports, and Valuations made of Coal, Iron, Slate, Pyrites, and other properties at home and abroad. Enquiries for Road and Railway Materials, Mining Plant, Pipes, Castings, &c. Plans, &c., of the most modern and economical mining appliances, fittings, and arrangements.

I have been long acquainted with the principal Coal and Iron Works in the North, with the Slate Quarries in North Wales, and for many years was Chief Engineer of the Tharvel Mines, Works, and Railway in Spain.



PARIS EXHIBITION, 1878.

GOLD AND SILVER MEDALS AWARDED for
Steam-Engines & Boilers, also the Special Steam Pump,
with Holman's Condenser & Compound Pumping Engine.



TANGYE BROTHERS AND HOLMAN,

HYDRAULIC AND GENERAL ENGINEERS

CORNWALL HOUSE, 35, QUEEN VICTORIA STREET, LONDON, E.C.,
AND BIRMINGHAM, (TANGYE BROTHERS), CORNWALL WORKS SOHO.

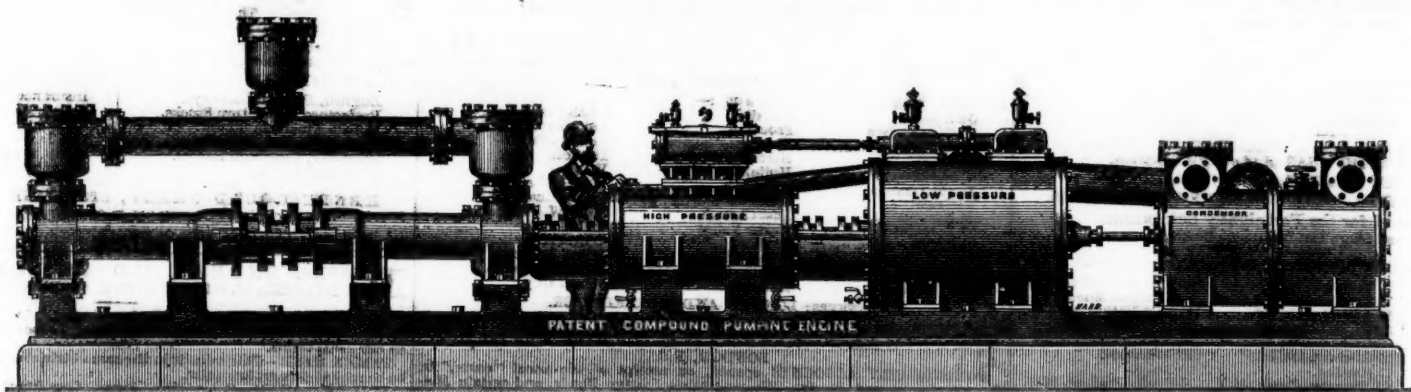
THE "SPECIAL"

DIRECT-ACTING

COMPOUND PUMPING ENGINE,

For use in Mines, Water Works, Sewage Works,

And all purposes where Economy of Fuel is essential.



THE "SPECIAL" DIRECT-ACTING COMPOUND PUMPING ENGINE, WITH AIR-PUMP CONDENSER.

After several years of successful application for all purposes to which steam-driven pumps can be applied, THE "SPECIAL" STEAM PUMP STILL MAINTAINS THE FIRST POSITION IN THE MARKET, notwithstanding that it alone—of all direct-acting pumps—has been subjected to the great variety of severe tests that must be encountered in such a period of time. Some valuable improvements have been suggested in the course of a long experience, and their adoption has rendered the apparatus at once

THE SIMPLEST AND MOST CERTAIN IN ACTION.

The illustration shows an extension of the principle of this Pump to a Compound Steam Pumping Engine, by which the economical advantages resulting from the expansion and condensation of steam are very simply and effectively obtained. The steam after leaving the high-pressure cylinder is received into and expanded in the low-pressure cylinder, and is thus used twice over before being exhausted into the condenser or atmosphere. The Engine combines simplicity, certainty of action, great compactness, fewness of parts, and consequent reduction in wear and tear.

Several thousands of the "Special" Steam Pumping Engines, with high-pressure cylinders only, are in use in British and Foreign Mines, Water Works, &c.,—and for confined situations, or where Engines of a comparatively small size only are necessary, they will still meet all requirements—but their application will be very largely increased, since it has been found practicable to embrace the important features of expanding and condensing the steam, so that increased power may be obtained, and the consumption of fuel greatly economised.

THE "SPECIAL" DIRECT-ACTING COMPOUND STEAM PUMPING ENGINE is the most simple appliance for deep mine draining and general purposes of pumping ever practically developed, and the first cost is very moderate compared with the method of raising water from great depths by a series of 40 to 50 fathom lifts. No costly engine-houses or massive foundations, no repetition of plunger lifts, ponderous connecting rods, or complication of pit-work are required, while they allow a clear shaft for hauling purposes.

SIZES AND PARTICULARS.

Diameter of High-pressure Cylinder.....In.	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
Ditto of Low-pressure Cylinder	14	14	14	18	18	18	18	21	21	21	21	24	24	24	24
Ditto of Water Cylinder	4	5	6	5	6	7	8	6	7	8	10	7	8	10	12
Length of stroke	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Gallons per hour approximate	3900	6100	8800	6100	8800	12,000	15,650	8,800	12,000	15,650	24,450	12,000	15,650	24,450	35,225
Diameter Suction and Delivery	3	3½	4	3½	4	5	6	4	5	6	8	5	6	8	9
Diameter High-pressure Steam Inlet.....In.	1½	1½	1½	1½	1½	1½	1½	2½	2½	2½	2½	2½	2½	2½	2½
Diameter Low-pressure Steam Exhaust.....In.	1½	1½	1½	1½	1½	1½	1½	2½	2½	2½	2½	2½	2½	2½	2½
Height in feet water can be raised with 40 lbs. pressure per square inch in cylinder	360	330	160	360	250	184	140	360	264	202	130	360	275	175	122
Ditto ditto ditto—with Holman's Condenser...	480	307	213	480	333	245	187	480	352	269	173	480	367	234	162
Ditto ditto ditto—with Air-pump Condenser...	600	384	267	600	417	306	335	600	440	337	216	600	459	203	203

CONTINUED.

Diameter of High-pressure Cylinder	16	16	16	16	18	18	18	18	21	21	21	24	24	24	30	30
Ditto of Low-pressure Cylinder	28	28	28	28	32	32	32	32	36	36	36	42	42	42	52	52
Ditto of Water Cylinder	8	10	12	14	8	10	12	14	10	12	14	10	12	14	12	14
Length of stroke	36	36	36	36	48	48	48	48	48	48	48	48	48	48	48	48
Gallons per hour approximate	15,650	24,450	35,225	47,950	13,650	24,450	35,225	47,950	24,450	35,225	47,950	24,450	35,225	47,950	35,225	47,950
Diameter Suction and Delivery	6	8	9	10	6	8	9	10	8	9	10	8	9	10	9	10
Diameter High-pressure Steam Inlet.....In.	2½	2½	2½	2½	3	3	3	3	3½	3½	3½	4	4	4	5½	5½
Diameter Low-pressure Steam Exhaust.....In.	3	3	3	3	3½	3½	3½	3½	4	4	4	5	5	5	6½	6½
Height in feet water can be raised with 40 lbs. pressure per square inch in cylinder	360	230	160	118	456	292	202	149	397	276	202	518	360	264	562	373
Ditto ditto ditto—with Holman's Condenser...	480	307	213	154	603	389	269	198	528	363	269	691	480	352	750	487
Ditto ditto ditto—with Air-pump Condenser...	600	384	267	191	750	486	337	248	630	450	337	864	600	440	937	637

PRICES GIVEN ON RECEIPT OF REQUIREMENTS.

Any number of these Engines can be placed side by side, to work in conjunction or separately as desired, thereby multiplying the work or one Pump to any extent.

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Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,

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(Formerly Student at the Royal Bergakademie, Clausthal.)

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The publication of the Lecture this week is unavoidably postponed.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr. von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz North Germany.

THE PREVENTION OF COLLIERY ACCIDENTS.

YORKSHIRE COLLEGE MINING DEPARTMENT.

The introductory lecture of the session of the Coal Mining Department in connection with the Yorkshire College, Leeds, was delivered on Monday by the instructor, Mr. Arnold Lupton, M.I.C.E., mining engineer and colliery manager. Mr. H. C. BRIGGS presided, and amongst those present were Dr. Heaton, Prof. Rücker, Messrs. E. Baines, R. Reynolds, J. R. Ford, J. M. Sagar-Musgrave, W. Rowley, J. Lupton, &c.

The CHAIRMAN said that being largely interested in the coal mining of this district, he was glad to show his interest in the Mining Department of the Yorkshire College by presiding on this occasion. He felt that the profession of mining engineer was one that should not be lightly entered upon. It involved very heavy responsibility, and a large amount both of physical strength and courage and mental culture, a knowledge of mathematics, of physical science, some knowledge of chemistry (including the properties of gases), of geology, and in addition to that, in order to be a good colliery manager, one required to have great tact and discretion in dealing with those whom he had under his charge. Sometimes, unfortunately, the profession required great physical bravery, when they had to lead a forlorn hope to encounter dangers which were sometimes worse than even going up to the cannon's mouth. Old and experienced engineers, by themselves going through some of these painful experiences which had been too frequent among us, had got their knowledge; but now by the institution of these lectures and in this department, it was hoped in some degree to give them the theoretical knowledge before they went to face the responsibilities and practical management of mining underground. And these responsibilities seemed to be increasing every year. The tendency of the Legislature was to increase the responsibility, not only of the managers but also of the coalowners. It was, therefore, the more desirable that all the coalowners should, by every means in their power, strive to second the efforts made—through the liberality of the Drapers' Society of London—by the Council of the Yorkshire College. (Applause.) In conclusion, the Chairman presented prizes and certificates to several of the successful students of last session.

Mr. ARNOLD LUPTON then proceeded with his lecture on "Colliery Accidents," which was illustrated by a large number of diagrams and an elaborate statistical table, to which frequent reference was made. He said that in each little community it happened that fatal accidents occurred, generally after a long immunity from catastrophe. Rare as those accidents were in each mine, still so large was the number of mines, so numerous the population engaged in them, that when all the accidents that happened everywhere were added together it made a figure too large to be regarded without great regret, although the statistician found no ground for alarm. It was said that if all the laws of health were duly observed, the death-rate in this country need not exceed 16 per thousand per annum, whereas it was on an average of many years 22 per thousand. This excess in the death-rate, owing to preventable causes, represented a sacrifice of 200,000 persons every year, and of that number about 1100 only were killed by accidents in coal mines, although the population engaged in mining amongst whom those accidents occurred numbered 600,000. Comparing these proportions, it would be found that if all ranks and communities in this country carried on their work as well as colliers, colliery managers, and coalowners, the excessive deaths would be reduced rather more than one-third, and 25,000 lives would be annually saved. The comparative safety of a modern coal mine was due to the constant efforts of those connected with the great experience of the coal mining community, but the least relaxation of effort or diminution of capacity on the part of those who controlled our mines would result in an increase of accidents. It was only by study and scientific training that the rising generation could escape the alternative of bitter experience. His colleagues at the Yorkshire College could teach all the science that was known about mines, whilst his own department showed how all these sciences had received a practical application at the hands of the eminent engineer who founded the profession to which he belonged. In consequence of recent explosions, the Government had appointed a Royal Commission to enquire into accidents in mines, in order to ascertain if there were any scientific appliances and methods by which the number of accidents would be diminished, and those who had read the reports of that Commission must admit that there existed no better instrument for the collection of the latest and best information than a Royal Commission, composed of some of the most experienced and most scientific men in the country. He looked forward to the publication of their report with great interest, and had little doubt that it would contain information of great value, which would tend to the diminution of accidents; but if the report was to produce the maximum of good, he thought it should be sent free of cost to all colliery owners and managers, together with the extremely valuable reports of the Inspectors of Mines, which were now for the most part buried in oblivion. The lecturer continued—The prevention of accidents cannot suddenly be attained by any method. Accidents cannot be prevented except by the gradual education of all concerned, first of all, to value their own lives and the lives of others (because recklessness and indifference to life is one of the causes of colliery accidents); secondly, to know the means of avoiding accidents; thirdly, to have that strength, skill, coolness of judgment, and prompt decision and action without which those who are engaged in coal mining will sooner or later fall victims to those forces of nature which are always on the alert to take advantage of every mistake. This practical education of himself and of others constitutes the second great department of a mining engineer's work; and so important and absorbing is this occupation that it often occupies the foremost place in the engineer's attention, causing him often to think more of the safety than of the economy of the mine. But this determination to make the mine safe is found in practice to lead to economy. The safest method of working a coal mine is also the cheapest; and it is also found that the cheapest method of working a mine is the safest. If money is wasted at a coal mine, it will very likely be wasted in some place where there is unexpected danger to remove; and taking men and mines as they really are, having regard to the hard facts that bills must be met and bankers won't allow over-drafts, mines that are not laid out on an economical system are not likely to be free from causes of accident that might be removed by an expenditure of money. Everybody, of course, knows the enormous expense caused at a colliery by an explosion, amounting perhaps to 100,000, loss to the owner; but perhaps it is not so generally known how much the general cost of getting coal in a district is enhanced by accidents, because they cause that district to be avoided by colliers who can choose, and it is necessary to raise wages to other places where there is no danger. In order that we may know how to diminish the number of accidents it is necessary that we should first consider the various causes. The necessary information is contained in the reports of Her Majesty's Inspectors of Mines. From these I have prepared a table showing the deaths from every cause during the last fifteen years. The following is an abstract of the table:—

Years.	Total on surface.	Total in shafts.	Total miscellaneous underground.	Total falls of ground in mine.	Total deaths from explosions of gas and gunpowder.	Total deaths from all causes.	Tonnage of coal raised.
1864	69	104	110	395	105	863	95,122,919
1865	63	103	105	381	178	980	98,911,169
1866	107	162	183	361	672	1485	100,728,881
1867	86	159	180	449	313	1188	105,077,743
1868	77	132	175	495	186	1015	104,566,359
1869	80	129	156	466	282	1103	108,003,482
1870	79	129	158	411	213	991	112,875,725
1871	72	123	168	435	277	1075	117,439,251
1872	78	155	199	459	174	1061	123,393,853
1873	82	157	174	455	126	994	129,680,131
1874	97	143	171	394	190	975	126,590,108
1875	97	154	184	422	305	1162	133,306,485
1876	104	121	127	431	111	894	134,125,168
1877	93	124	159	421	354	1151	134,179,968
1878	85	104	137	443	507	1366	132,612,063
Grand total 15 years	1305	2138	2445	6345	4083	16,316	1,755,813,303
Average of 15 years	87.00	142.53	163.00	423.00	272.20	1087.73	117,040,926.86
Percentage	8.00	13.06	15.00	38.91	25.02	100	

In remarking how few are the accidents that occur from the breaking of ropes or chains, Mr. Lupton incidentally said—it may not be out of place to observe that whilst there are constant outcries against the dishonesty of manufacturers, here is a proof that there is a great deal of honesty; 250,000 men, twice every day, trust their lives to the honesty of the rope and chain maker, who undertakes to supply a rope of iron or steel of a given quality to hold a given weight, and he does so, failing but once in 15,000,000 tests. If the rope was bad, it would break

when new, but with wear the best rope becomes unsafe. The time to change depends upon the judgement of the engineer or manager, by whom the rope is examined and tested every day. It is satisfactory to note that surface and shaft accidents show a tendency to become less numerous. They are actually less in number than 15 years ago, although the tonnage of coal got has increased 35 per cent. We know how to underground accidents. Amongst these are accidents caused by machinery, similar to ordinary machinery accidents on the surface. There is a greater liability to machinery accidents in pit working, the poor light and to the small space in which the machinery is necessarily confined. You will notice that during the last 15 years over 1700 deaths have been caused by trains or tubs, and on inclined planes. These accidents occur on the roads along which the coal is conveyed from the collier to the pit bottom; some are caused by the lad who is driving a horse or a pony which is dragging a train of tubs falling down and being run over, others are caused by the person killed being on a road along which the tubs are drawn by machinery, and which is not wide enough to allow the person to pass the train of tubs. A large proportion of these accidents are due to negligence on the part of the victim, who very likely had no occasion to be on the road, or who did not take advantage of the refuge-holes made by the road-side, in one of which he might have rested safely whilst the train passed; or it might be due to the negligence of the officials in not making a sufficient number of refuge-holes. These accidents may be diminished by care on the part of the managers of mines. Out of the total of deaths at collieries caused in 15 years—that is 16,316—no fewer than 5275, or nearly one-third, are due to accidents which may be classed amongst machinery and road accidents, and are not specially due to the conditions of a coal mine, but are sure to accompany the use of machinery and the rapid movements of great weights, such as the 133,000,000 tons of coal now annually raised. The remaining 11,041 deaths were caused by accidents peculiar to a mine. A few deaths (201, or 13.40 per annum) are caused by suffocation by gases. These are nearly all attributable to gross carelessness on the part of the victim, because warning of the presence of the gas is nearly always given by the light that every person should carry; but sometimes men will walk or crawl into a place filled with gas, where a light will not burn, for some trivial object, thinking that they will have strength to return before the gas overpowers them. These men are probably aware of the risk they run—that is to say, they would give the correct answer in an examination; but at the moment when they destroy themselves they do not fully realise what they are about, the trifling business on which they are engaged having more effect on their minds than the danger to which they are accustomed. By far the most fatal cause of accidents in mines are falls of stone and coal, by which 6345 deaths have been caused in 15 years, or nearly 40 per cent of the total number. It is a most wonderful thing that we should be able to extract the coal which lies buried hundreds and thousands of feet of rock at all, and to work beneath this enormous weight of ground without some accidents is impossible. At a depth of 1000 ft. every square foot of surface presses with a weight of 70 tons upon the ground in the mine, and no pillars of brick or props of timber can carry this weight; and when by the excavation of the coal over a large area the rocks give way beneath the load above the men must seek safety in flight; but when the ground has settled down and filled up the empty space, roads are cut in the rocks that have thus occupied space where the coal previously existed, and there is no danger of stones falling here, except loose pieces varying from a few pounds to 20 tons in weight, which can be supported by props and bars of wood, iron, or steel, or by masonry work. Also the places where the men are getting the coal a sufficient number of props and bars, and pillars of stone called packs, will support loose pieces, and prevent accidents, except in the case of the heavy weights referred to, but even then, whilst the props and packs cannot sustain the coal, they keep a crust of ground safe over the workman's head whilst he escapes to a safer place. I have never known a single accident by falls of roof or coal which was not due in a great measure to contributory negligence on the part of the deceased. The correction of this negligence is one of the most important parts of a colliery manager's duty. By careful timbering, spragging, and packing these accidents could be reduced at least 50 per cent., and this without any extra cost to the colliery owner or loss of wages to the men. It is not to be thought that this can be brought about by law; the law is already sufficiently stringent; workmen, managers, and owners are all liable to severe punishment for neglect of their duties in this respect. About one man in every thousand working in coal mines loses his life in a year through this cause, and in some mines, where the nature of the rocks is trustworthy, and the men and officers are careful, year after year passes by without a single fatal accident. Although the danger is ever present, it is always met by precaution; but still there is a tendency to omit precautions when accidents become scarce. The annual number of deaths from these accidents is the same as ten years ago, but the tonnage of coal got has increased 30 per cent. We will now consider the explosions in coal mines, 4033 persons have lost their lives by explosions in coal mines, including ordinary blasting accidents, in the last fifteen years; this is just 25 per cent of the total number of deaths. On an average of fifteen years 272 persons lose their lives annually by this cause. These explosions may be divided into several classes. About 20 per annum are killed by ordinary blasting accidents, caused by using powder or other explosives in some extremely careless manner, causing the death of the persons to blame. The other deaths are due to explosions of fire-damp (light carburetted hydrogen and air); 92 per annum, or 36 per cent. (more than one-third), of these are caused by lighting the gas with a candle or other naked light; 37 per annum, or more than 38 per cent., of the fire-damp explosions are due to the imperfections in the safety-lamps used, or the methods of using them; 14 per annum, about 5 per cent., are due to gas firing at the furnace used for ventilating the mine. This cause of accidents can be avoided by using fans instead of furnaces, and the latter are being generally superseded; 2.60 per annum are killed by explosions of fire-damp, caused by some accidental fire in a mine, such as might be caused by spontaneous combustion; 45 per annum, or about 17 per cent., of the deaths due to explosions are caused by the lighting of the fire-damp by a shot or blast of powder. The study of my statistics is sufficient to convince one that no sovereign remedy, no great invention, no new discovery, or new law, can stop accidents in coal mines altogether; but it also proves that they may be reduced in number by new discoveries and inventions, and by the careful application of methods that are already known. By far the greater number of explosions are primarily due to defective ventilation. This defective ventilation is partly due to carelessness on the part of the officials and owners about the details of the ventilation arrangements. Many explosions are due to a door being left open through the carelessness of some man, but it is a bad system of ventilation which makes the safety of a mine depend on a single door. Vain attempts are often made to ventilate the distant portions of a mine without having the air-roads sufficiently large. The air is often taken in a current from one fiery part of a mine to another, instead of bringing separate currents of fresh air to each fiery district. Perhaps the most fatal of all causes of accident is driving roads or headings in a fiery bed of coal so as to tap the gas, which comes off in such large volumes as to overpower the best ventilation. The latter cause of accident can be removed by the substitution of the longwall system of coal mining, or by reducing the speed at which headings are driven into fiery coal. The defects in the ventilation of mines can only be remedied by the increase of our knowledge, and the managers and officials of mines of the laws by which the ventilation of mines is governed. These are simple and well ascertained, but the practice of them is not by any means universal; in fact, it is rather unusual to find a mine in which the science of ventilation is applied to the fullest extent so as to produce the best effects at the least expense. This most important subject is one to which I endeavour to direct the attention of the students in the coal mining department, and the full understanding of the question can only be attained by long and careful study. There are, however, occasional—happily rare—when the best ventilation is ineffectual—when gas suddenly bursts into the mine in a great volume. Then the safety of a mine depends on the absence of unprotected light or fire. Sometimes the gas is so strong that it will not explode, because it is not sufficiently diluted with air, but if there is air enough to burn the gas then the safety of a mine will be imperilled by a blast of gunpowder, by a defective lamp, by a naked light in any part of a mine—say, at the downcast pit bottom—or a ventilating furnace, or a lamp or fire at the pit top. These outbursts of gas are extremely rare in Great Britain, except in the Barnsley district, where about once a year some great outburst occurs, though unknown to the general public, who only hear of these events when the precautions taken to prevent an explosion fail, and when they succeed. The cause of the outburst is the depth of the mine, and it is a hopeful fact that, notwithstanding the daily increasing depth of coal mines, the accidental death-rate is being diminished. In the three years ending 1866, 88,331 tons of coal were raised per life lost. In the three years ending 1878, 117,366 tons of coal were raised per life lost. This improvement represents an annual saving of 470 lives, or 28 per cent. on the old rate. Those who know what science, skill, care, and Government inspection had done before 1864 to prevent accidents cannot fail to regard with pride the improvement that has been effected since then. In considering the question, What can we do still further to reduce the number of accidents in coal mines, we have been given. It has been said that every mine ought to be worked with safety lamps. This would entail extra expense at a very great number of pits, because the light from a lamp is inferior to that from a candle; but it is also thought that the use of them causes reliance to be placed on them instead of in ventilation; therefore in a large proportion of coal mines it is thought by many that the compulsory use of safety lamps would do more harm than good. There is no doubt that what is wanted is an absolutely safe safety lamp, which will give a good light. This has not yet been invented; when it has will be a great step forward. Many kinds of explosives are included in the list of the use of blasting powder in mines. But a law to do this is very difficult to devise. To prohibit powder entirely would be like returning to the days of bows and arrows in warfare, and if we were denied the use of explosives we could not compete with foreign nations; and, indeed, it would seem a pity to forbid the use of powder in the arts of peace, whilst its use is still so fatally common in other pursuits. In 1877, 183 persons not connected with mines, lost their lives through the careless or improper use of gunpowder in England only, or nearly two and a half times the number who are annually killed by its use in mines; so that it would perhaps be reasonable to forbid its use altogether for sporting and other unnecessary purposes as for mining only. In support of this view, that the use of powder is necessary in mines, we have only to consider how shafts could be sunk, tunnels driven, air roads and horse roads enlarged without its use. It would seem useless to attempt to do without powder for these purposes as a general rule; therefore, any law that deals with the question, could only forbid the use of powder in certain parts of the mine; and I must confess that I think it would be difficult to frame a law that would permit the use of powder in stone-work and forbid it in coal-work, because in many mines there is a great deal of stone-work in the most dangerous places. A hard-and-fast law would permit blasting in many dangerous places and forbid it in many safe places. But when the use of powder depends on the discretion of the management at each colliery, it is seldom that powder is used in dangerous places. For the last 20 years it has been the rule to forbid its use in places where there is apparent danger. Powder should never be used in a fiery mine, near to any goaf or place that cannot be completely examined and proved to be clear of gas. It should never be used if there is any accumulation of gas in that part of the mine, even though the accumulation of gas may be at an apparently safe distance, because the gas may suddenly issue when the shot is exploding. In mines liable to outbursts of gas it should not be used, except when urgently necessary, and then only when the bulk of the men are out of the mine. Only one shot, if in coal, should be fired at once. The officers of the mine should see that every shot is properly set, so as to do its work thoroughly without too much powder. No large charges of powder should ever be fired in a mine; 1 lb. of powder is as much as it is ever necessary to use in one shot in stone, and in coal ½ lb. is as much as is ever necessary. Smaller charges are generally sufficient. By attention to these rules, and with proper discipline and ventilation, and observing also the other special rules, accidents in coal mines from blasting need hardly ever occur. It has been said that a "blown-out shot"—that is, a shot that does not break down the

coal, but blows the stemming out of the hole, as the stemming is blown out of a gun—that the flame from this shot will ignite the dust in the mine and cause the dusty atmosphere to explode; but as far as the experiments have yet proceeded it has not been shown that an explosion will be produced by a small charge of powder. It is only with large charges that the danger exists. If every heading is properly holed and cut on one side a small charge of powder will suffice to bring it down; and if in the shafts the colliers are compelled to hole a long length of coal a very small charge of powder will suffice to break down the heading of coal that is got on the end. I speak from experience of the strongest coal in Great Britain. Fully alive as I am to the danger of the reckless use of powder, I should still regard it as a deep disgrace that a law should have to be passed to deprive us of the use of the most powerful auxiliary in engineering work, because those who used it had not proper discretion; but I don't think this charge can be sustained against the greater number of colliers, managers, and owners. In the great mining districts of Northumberland, Durham, Derbyshire, Nottinghamshire, Leicester, and Warwickshire no explosions are caused by powder, and the care and science which have made these districts pre-eminent for safety may be extended to other parts of the country. In conclusion, I wish to give notice that in the course of instruction for this session I shall deal with the various methods of working coal in great detail, and shall show in what methods both safety and economy have been found. (Applause.)

Mr. BAINES, in proposing a vote of thanks to Mr. Arnold Lupton, said the lecture was full of interesting facts, arrived at by a cool, calm judgment. It was a good, practical discussion, it seemed to him, of the best means of adapting scientific facts to the working of mines. The subject was vast, and was of great importance to a country placed on a large coal bed, which was at once our wealth and our danger. He was extremely glad that through the liberality of a great London company the Yorkshire College had been enabled to institute those lectures, and, as far as his judgment went, they had obtained in Mr. Arnold Lupton a well-informed, well-experienced, and judicious lecturer. (Applause.) Through those lectures and classes mining stewards and others would have their attention drawn to important facts which would be of service to them, and he hoped that through the whole county the movement would be a great success. He had satisfaction in hearing that the chairman had placed two of his sons at the Yorkshire College to receive scientific training—an example which had been followed by other gentlemen present.

Mr. SAGAR-MUSGRAVE seconded the resolution. The CHAIRMAN said he had listened to the lecture with great interest, and he concurred in nearly everything Mr. Lupton had said. The statistical table, &c., used by the lecturer were remarkably interesting, showing, as they did, very distinctly the improvements which had taken place in mechanical appliances for working deep coal seams. He trusted the classes would be attended by a larger number of students than had entered last session. For this session two students had come from the county of Durham, and it was rather a feather in the cap of Yorkshire if it could teach anything on the subject of mining to our northern neighbours.

The resolution having been carried heartily, Mr. LUPTON briefly acknowledged the vote.

Dr. HEATON proposed a vote of thanks to the chairman. He said that whilst the success of the College was mainly due to the strength of the teaching staff and to lecturers, they owed very much to the lay help they received in various ways. For the class they were that day opening they were peculiarly indebted to the Drapers' Company.

Mr. JOHN LUPTON seconded the proposal, which was cordially agreed to, and the proceedings terminated.

SCIENCE AND ART FOR THE PEOPLE.

During the past few years the advantages of scientific instruction has been acknowledged, not only by those who are in the position to turn it to account, but by the general public, so that it has become fashionable for all classes to seek association with such scientific bodies as have been within their reach; and the majority have been disposed to make this association as widely known as possible, by attaching certain initials to their names whenever opportunity has offered. The natural consequence of this has been that some difficulty has arisen in determining without hesitation the precise significance of the initials; thus F.S.A., which used to be supposed to indicate the fellowship of the Society of Antiquaries, has been assumed, without authority of council, to signify membership of the Society of Arts; and in the same way F.C.S. might indicate not only connection with the Chemical Society but also the fellowship of the Cordwainers Society, and thus the same initials would be used by the most experienced public analyst and by the gentleman who mends his boots. But there still remained some who could not even comply with any of the existing societies capable of giving a title, so that the inauguration of the Society of Science, Letters, and Art, of London, became a matter of absolute necessity. Keeping pace with the times this useful society has taken up its quarters in a remote suburb of London, where, rentals being moderate, excellent accommodation is secured at so low a price that fellowship can be offered for a guinea per annum, and even this can be compounded for by a single payment of 10*l.*, so that the honor is placed within the reach of all classes.

But the great recommendation regarding the Society of Science, Letters, and Art, of London, from a scientific point of view, is its extremely liberal character, the conditions of admission involving nothing more than the payment of the fees, and even when these are not forthcoming an honorary secretaryship is offered, which will equally entitle the recipient to the Latin diploma of the society. It may be presumed that some subscriptions have already been received, since the society is announced in various suburban and provincial newspapers, candidates for admission are invited, and the fellowship is offered without introduction upon the simple application for prospectus. The first application is answered by a polite letter, with an intimation that "it will not be necessary to have the admission paper signed by any of the Fellows, you will be admitted without. If you send the same in at once, you can be admitted as a foundation fellow at half the Life Fee (five guineas)." Now, the society having one poet for president and another for secretary, with a gentleman whose name recalls university degrees in absentia as another principal officer, it is not every applicant for the prospectus who is inclined to go further. If he take no notice he receives in due time a note, stating that they are appointing local honorary secretaries, and asking whether he would like to act for —, the announcement being accompanied by a statement that "Local honorary secretaries who desire the Latin diploma should immediately communicate with the resident secretary;" whilst as a further inducement it is intimated that "a hood, gown, &c. (scarf for ladies) has been proposed for" the fellows.

That the society in question may have been formed with good intentions is not for a moment doubted, but the indiscriminate admission of candidates, and various other circumstances connected with the association, certainly require elucidation.

THE VICTORIA UNIVERSITY.

Just two years ago a series of articles was published in the *Mining Journal*, pointing out the desirability of establishing in Manchester a university in which academic study should be exacted as a condition for a degree, and it was urged that the Owens College already possessed all the necessary machinery for enabling the University of Manchester to be at once formed out of it, and that the movement for the incorporation of the Owens College as a university was precisely an effort to avoid the evils of the paper university system, and yet retain whatever advantages that system may possess as compared with any other method of applying educational tests, and securing or facilitating the acquisition of the largest amount of useful knowledge to the largest possible number. During the two years which have elapsed since the matter was first publicly discussed the exertions of all concerned to carry out the project have been continuous, and although certain individuals may have experienced some little disappointment at the rejection of a favourite notion of their own, the slightly conflicting interests which then existed have now been reconciled, and the establishment of a university closely corresponding in constitution with those of Oxford and Cambridge, yet available to every member of the community, without consideration of creed or doctrine, has been assured.

It will be recollected that in May last a strong deputation waited upon the Lord President of the Council, consisting of representatives of the Owens College and of the Yorkshire College at Leeds, and that this joint deputation urged on the Privy Council the expediency of granting a charter incorporating a new university on a scheme differing not very materially from that originally propounded. The changes were merely in matters of detail, and did not in any way affect the main object, and would probably have been regarded as altogether unnecessary but for certain misapprehensions on the part of those not belonging to the Owens College. The original proposition was that a university charter should be given in the first instance to the Owens College, certain representatives of the Crown and of the public being included in the incorporation, so that the interests of all might be cared for. The Owens College would thus have been made practically answerable for the success of the project, whilst any other

incorporated college, upon acquiring similar rank, could have claimed to share the honours. It was, however, feared by some that this would give the proposed university too much of a local character, and that its national character would be better assured by granting the charter to a nominally new corporation consisting of nominees of the Crown and representatives of the public, with the addition of representatives of all incorporated colleges desiring to obtain its degrees. Possibly the Owens College gains as much as any other by the change, seeing that the main point—the essentially academic character of the new university—is secured, but there are many totally unconnected with Manchester who regret the change of name which has been agreed to, from the feeling that to hail from the University of Manchester would have conveyed a more definite idea than to claim connection with the Victoria University, just as a reference to Dr. Tickell Jones would convey a less definite idea than the mention of the Right Reverend the Bishop of St. David's.

But trifling matters such as these may well be passed over, since the Owens College will be named in the Charter, and will form a part *ab initio* of the new university, and it is gratifying to learn that in all essential respects the scheme remains as it was, especially as to the two main points—that academical study is to be exacted as a condition of a degree, and that the representatives of the colleges which form the university are to outnumber the non-academical members of the governing body. It has already been stated by the Government in both Houses of Parliament, in reply to questions put, that they had advised her Majesty to grant the prayer of the deputation, so that only the usual and necessary formalities have now to be gone through to make the existence of the Victoria University an accomplished fact. The draft charter is, probably, already before the law officers of the Crown, so that soon after Parliament meets (it being necessary that such charters should lie for a given number of days on the table of both Houses) we may hope to have the pleasure of announcing that it has been formally granted. The advantage which connection with such a university will give to the Owens College, to the Yorkshire College, and to all other colleges carried on with equal energy and care to provide fully for the higher educational wants of the community and to students generally, is so evident that any serious parliamentary opposition is scarcely to be anticipated, more especially as such opposition would inevitably fail, and would assuredly reflect discredit on those offering it.

THE YORKSHIRE COLLEGE OF SCIENCE—MINING DEPARTMENT.

The prominent place given to the Coal Mining Department in the Yorkshire College of Science has several times been noticed in the *Mining Journal*, and the inaugural lecture of Mr. Lupton on Monday, the subject of which was "Colliery Explosions," can leave no doubt that the useful work of better educating those connected with the management of collieries, which has been undertaken by the Yorkshire College, will be energetically continued. It cannot be doubted that in appointing Mr. Arnold Lupton, M.I.C.E., a mining engineer and colliery manager of considerable experience, to the office of instructor the Council secured the confidence of colliers and of the public. The Chairman (Mr. H. Currer Briggs) very truly remarked that the profession of mining engineer was one that should not be lightly entered upon. It involved very great responsibility, and a large amount both of physical strength and courage and mental culture, a knowledge of mathematics, of physical science, some knowledge of chemistry (including the properties of gases), of geology, and in addition to that, in order to be a good colliery manager, one required to have great tact and discretion in dealing with those whom he had under his charge. By the institution of the mining lectures and mining department in the Yorkshire College it was hoped to give the members of the profession the necessary theoretical knowledge before they went to face the responsibilities and practical management of mining underground.

The lecture being given nearly verbatim in another column, it will suffice to direct attention to it, and to observe that it contains a vast amount of interesting and useful information; the lecturer, moreover, announcing that in the course of instruction for this session he will deal with the various methods of working coal, and show in what methods both safety and economy have been found. The mining classes, to which Mr. Lupton's lecture has special reference, are to commence on Monday, and, to judge from the past year's attendance, their practical utility is widely appreciated. During the past year the students have varied in age from 15 to 45, and underground stewards who have never had the means of acquiring a technical knowledge of their profession, and these freely acknowledged having derived great advantage from it. The rest of the class have, of course, been students of the profession. It should also be mentioned that the very existence of these classes is due to the liberality of one of the City of London Guilds—the Drapers'—and that their munificence was fully acknowledged by several speakers at the meeting, the opinion being general that the facility which their endowment gave for the appointment of competent teachers had contributed largely to the success of the college generally.

FOREIGN MINING AND METALLURGY.

The French forgemasters representing principally the two groups of the Nord have determined on a small advance, but they have deemed it prudent to assume a strictly moderate tone at this period of the year. They will hold another meeting at Valenciennes on Nov. 6. The new French Railway Plant Company has ordered 300 trucks in Belgium.

The Belgian iron trade continues to exhibit much animation. The reports current are rather contradictory in some respects, but still they show that there has been, upon the whole, a very marked improvement. According both to the producers of raw materials and forgemasters the rise is gaining strength from day to day. Pig is advancing, and iron is rising also. Makers of machinery have not been able to establish an advance at present. The Charleroi Association of Forgemasters has issued a circular to the effect that the members of the association are unanimous in reporting a good demand and a liberal current of orders. The improvement in business, the association adds, is not at all of a local character; it is noticeable also in France and Germany, although in the latter country it has been of a more timid character. Most of the works in the Charleroi district are now engaged with orders for several months in advance; and under these circumstances a moderate advance in prices has been at length determined on. At Liège the forgemasters have shown themselves more timid in the matter of an advance in prices; a rise has, however, occurred in plates. The Huy rolling-mills and the Espérance forges experience difficulty in executing the numerous orders which they are receiving.

In the coal trade of the French departments of the Nord and Pas-de-Calais there has been scarcely anything of interest to report. It has been the same with the Saône-et-Loire. In the Gard the situation without being brilliant is, nevertheless, better than in some of the other French basins. This arises from the fact that this basin from its central position escapes the influence of foreign competition, so that its coalowners can dispose of their production with comparative ease. Moreover, the principal demand for coal in the Gard arises from ironworks which are now in full activity, so that the state of affairs in this district may be regarded as, at any rate, relatively satisfactory.

In the Belgian coal trade large orders have been offered by Belgian ironmasters, who feel that under present circumstances they cannot ensure coal supplies for too long a period in advance. Contracts for five years have been steadily refused by Belgian coalowners, who have got the north eye open quite as wide as Belgian ironmasters. It is evident that Belgian coal quotations will never fall lower than they have been; and, therefore, Belgian coalowners feel that they run no risk in standing out for higher rates. Several Belgian colliery proprietors have attempted an advance of 10d. per ton on industrial coal; this rise has been accepted as regards small quantities, but it has not been established with equal readiness as regards important deliveries. Domestic qualities of coal have been in strong demand in Belgium, and a rise has been established in these descrip-

tions without much difficulty. Upon the whole, Belgian coalowners feel themselves justified in anticipating an encouraging winter season.

The St. Marten Collieries, at Marchienne-au-Pont, have just been offered for sale by auction, but they were not disposed of.

South Wheal Crebor, Limited.

Established under the Companies' Acts, 1862 and 1867, whereby the liability of the shareholders is strictly limited to the payment of £1 per share.

Capital £40,000, in 40,000 Shares of £1 each.

Payment, £1 per Share on Application. Should no Allotment be made the Application Money will be returned in full.

DIRECTORS.

HON. J. M. ERSKINE, Craigie Bank House, Perth.
JOHN J. KNIGHT, Esq., 40, Hemingford Road, Barnsbury.
WILLIAM THORNTON, Esq., 164, Stanhope-Street, Regent's Park, N.W.

SOLICITOR—A. M. BRADLEY, 75, Mark-lane.

BANKERS—ROYAL EXCHANGE.

SECRETARY—JESSE SMITH.

TEMPORARY OFFICES—26, GRACECHURCH STREET, LONDON, E.C.

PROSPECTUS.

This company has been formed for the purpose of working and further developing the South Wheal Crebor Mine, which is situated in the best known and most prolific copper district of England, in the parish of Tavistock, in the county of Devon, in the immediate locality of all the productive mines of the district, being bounded by Wheal Crebor on the north, on the north-east by Crowndale, on the east and south-east by Devon and Courtenay, on the west by East Wheal Russell, and on the south-west by Devon and Cornwall United Mines, all of which have proved productive. Devon Great Consols (the richest copper mine in England) and Bedford United mines are within a short distance to the north-west.

The South Wheal Crebor company's set is a large superficial extent, being almost a square with a diagonal of about 1300 yards.

As in the neighbouring mine—Wheal Crebor—so in South Wheal Crebor, the principal lodes bisect the property from east to west. These lodes are seven in number, and they are themselves intersected by a caunter lode running very nearly at right angles to them.

The mining operations, which have recently been prosecuted by private individuals on this set, have been confined, from want of sufficient enterprise or capital, or both, to delving for ores at shallow depth. On the surface, however, considerable skill, energy, and capital have been expended in the judicious laying out of dressing floors, &c., and in the erection of shops necessary for a large mine in full work. It will be seen by reference to the accompanying reports that Mr. Jehu Hitchens, Capt. John Goldsworthy, formerly manager of Crebor Mine, and Capt. Isaac Richards, the able and well-known manager of the most important copper mine in England—Devon Great Consols—have all recently inspected South Wheal Crebor, and are unanimous in the opinion that the set possesses great mineral value, and that judicious exploration only is required to ensure success.

Mr. HITCHINS observes:—
"You have all the advantages that your nearest neighbour, Wheal Crebor, possesses, excepting what you hope to find, a rich course of ore, and if operations are thoroughly carried out with ability, zeal, and true economy, with a sufficient capital, there is here presented, in my opinion, a prospect of your being in like manner rewarded, as the mine is in the same acknowledged mineral district, surrounded as it were with profitably productive mines—the Devon Consols to wit—and having also parallel lodes pervading the same stratification of mineral bearing clay slate, traversed by elvan courses of good character."

Capt. GOLDSWORTHY remarks:—
"Having had the management of the Wheal Crebor Mine for several years I can say from experience that the lodes in South Wheal Crebor will, without doubt, rank with those in Crebor. Hitherto, depth for depth, South Wheal Crebor has proved the better mine."

"At the furthest point west on the copper lode, a cross-cut was put out about 12 fms. through the elvan course, and a lode was cut with a north underlay. These two lodes will form a junction about 15 fms. below the 16, where there is every probability of a great course of copper ore being met with."

While Capt. ISAAC RICHARDS, the manager of Devon Great Consols, is of opinion that:
"A further and deeper development of this very important and valuable part of the mine cannot be too highly recommended, as the meeting with further good discoveries are, in my opinion, beyond a doubt."

"The other lodes which have been opened upon by shodding and shallow workings, are of a highly promising character, and being embedded in the same channel of ground as that in which all of the ore-bearing lodes of the district are found, I have no doubt that a trial of these lodes in depth will also be attended with good results."

Taking into consideration this consensus of favourable opinions, together with the fact that the price of copper is rapidly improving, and that the shares of the mine in the immediate vicinity are rapidly and daily increasing in value, the directors of South Wheal Crebor (Limited) feel every confidence in inviting applications for allotment of shares. The set is held under a 21 years lease from the freeholder, the right Honourable the Earl of Devon, at the low yearly rental of £25, which merges into a royalty of one-fifteenth.

SOUTH WHEAL CREBOR MINE.

Bella Vista, Tavistock, Sept. 25, 1879.

Agreeing with your request, I have carefully surveyed and inspected this property, which is situated in the parish of Tavistock, in the county of Devon, and adjoins the Wheal Crebor set, which is to the north, and forms its northern boundary; the lodes of the two sets are parallel, and are of a similar character. It is bounded to the west by the East Wheal Russell set, to the south-west by the Devon and Cornwall United Mines, to the south-east by the Old Wheal Courtenay, and north-east by the Old Crowndale set, and the Devon Great Consols is situated to the north.

The property is extensive on the course of the lodes, being 500 fms. from east to west, and about the same north and south, is also bounded by good roads, 2½ miles from the River Tamar and shipping port at Morewellham Quay, where the copper ore can be taken, sampled, and shipped, and is about 2½ miles from the railway station at Tavistock, where all kinds of materials can be obtained. There is also a never-failing stream of water from the Lumborn river, close by, which is available for pumping, hauling, dressing, &c., thereby obviating the necessity of using steam power.

The several lodes (which are six in number) are embedded in a strong mineralised slate rock, and intersected by elvan courses of the finest description, and where opened up by costeaning show unmistakable proofs of the existence of large deposits of very valuable rich copper ore, having on the back splendid gossan, intermixed with black oxide of copper ore of very rich quality.

The lode on which the adit level has been driven for over 300 fms., shows every indication of producing large quantities of copper ore at deeper levels. From this and former inspections, I find the engine-shaft is sunk 26 fms. below surface, or 16 fms. below the adit level. At this depth a cross-cut was put out north and intersected the No. 3 lode, which has a south underlay, the same proving to be from 5 to 10 ft. wide, and, even at such shallow depth, produced very rich copper ore, in fact such indications as to warrant a most profitable lode a few fathoms deeper, and a finer lode at such a shallow depth I never saw.

The drive has been extended west for a considerable length, and about 30 fms. west of the cross-cut a caunter lode was met, having an easterly underlay towards the shaft. Levels were extended on its course from 50 to 60 fms., and were wrought on a productive lode for upwards of 35 fms., and produced at this shallow depth, about £3000 worth of ore of rich quality, varying in produce from 7 per cent. to 20 per cent. At the furthest point west on the copper lode, a cross-cut was put out about 12 fms. through the elvan course, and a lode was cut with a north underlay. These two lodes will form a junction about 15 fms. below the 16 ft. level, where there is every probability of a great course of copper ore being met with. In extending the level north-east on the caunter lode, about 4 to 6 fms., a lode will be met with, which, where wrought on in the adjoining set, old Wheal Courtenay, has proved highly productive, and judging from the fine nature of the caunter lode, and the rich copper ore which it produces, a rich course of ore will be met with. This lode is parallel with the Wheal Crebor lodes. Having had the management of the Wheal Crebor Mine for several years, I can say from experience that the lodes in South Wheal Crebor, will, without doubt, in every way rank with those in Crebor. Hitherto, depth for depth, South Wheal Crebor has proved the better mine.

I would recommend the sinking of the engine-shaft to the intersection of the copper lode, which would be about 16 or 18 fms., and judging from its underlay, and the fine appearance of the lode in the 16 ft. level, good and lasting results would be met with. I would also extend the levels west to the caunter lode, and open upon the course of the same, where there is a good course of ore gone down for a great length in the bottom of the 16 ft. level.

There is an engine on the mine, whim, poppet heads, pitwork, and proper fittings, complete with bobs, &c., also tramroads laid in the 16, dressing-floors, carpenter's and smith's shop, and all other necessary plant.

In conclusion, I can positively say that from my knowledge and experience of this mine, and of those of the surrounding district, I have not in one single instance surveyed a property that shows brighter prospects of proving a great success, therefore I have much pleasure in congratulating you on possessing in South Wheal Crebor a *bona fide* investment of great and increasing value.

JOHN GOLDSWORTHY.

SOUTH WHEAL CREBOR MINE.

Oct. 1, 1879.

Is situated in the parish of Tavistock, at about two miles southerly from the town, and adjoins the set of the now celebrated Wheal Crebor, on the main lode of which (for there are several lodes in the set) operations were first commenced in the year 1803, under the management of my late father, when, after a fair exploration, a discovery was made at a shallow point, which in course of some years realised from £50,000 to £60,000 profit, but after a while, the mine ceasing to pay costs, like many other mines, it was given up. Other parties, however, believing in its promising character, undertook its further exploration, at times meeting with cheering indications and making fair returns of ore, but failing in their capital they were in turn obliged to give up. But the present company, nothing daunted, having carried the workings to the present depth, have been well rewarded with the very valuable discovery recently laid open, which has raised the market value of the mine to over £60,000, even in the short time since its first decided discovery, and there is, in my opinion, every promise that as explorations extend, both in extent and depth, the value of the mine will increase, and its profits for dividends prove permanent.

In the South Wheal Crebor, with which I have for some time been acquainted and connected, there are (say) six east and west lodes of more or less promising indications, parallel with and south of the Wheal Crebor lodes, one of which has been worked upon for a good length by a deep adit driven on its course west, in which at different points very kindly indications were presented; a north and south lode was also met with and worked upon, producing some good ore, so promising as to induce the sinking of a new shaft to a deeper level, where it again proved productive, but not sufficiently so to meet the expenses of the mine, and therefore, for want of funds to carry on the regular explorations and to supply the required machinery for that purpose, as also, I think, an uncertainty as regarded the water-power (which I am assured is now secured), this promising adventure was abandoned. Of the other lodes of this grant I have only to notice one to the south, named the Great Mundie Lode, which was discovered and partly opened upon some years since, of which I entertain a very high opinion, and, should you acquire this property, I strenuously urge you to direct particular attention thereto, and no doubt but that as the explorations advance, which should be on a scale commensurate with the prospects as developed, the other lodes will also attract due notice, as they are undoubtedly continuations east of the lodes worked upon in the west in Wheal Russell, East Wheal Russell, and others, when they yielded large profitable returns I am informed.

Here, also, you have the benefit (as before stated) of water-power, ample for all requirements, a matter I have always regarded as of paramount consideration, and the set is within reasonable distance to port for the carriage and shipping of the ore and landing of coals, materials, or machinery that cannot be procured at the good local foundries at a fair rate. The proximity to the town, where miners and other instructed mine labourers reside, is also an advantage. In fact, you have all the advantages that your nearest neighbour—Wheal Crebor—possesses, excepting what you hope to find—a rich course of ore—and if operations are thoroughly carried out with ability, zeal, and true economy, with a sufficient capital, there is here presented, in my opinion, a prospect of your being in like manner rewarded, as the mine is in the same mineral district, surrounded as it were with profitably productive mines—the Devon Consols to wit—and having also parallel lodes pervading the same stratification of mineral-bearing clay slate, traversed by elvan courses of good character.

SOUTH WHEAL CREBOR MINE.

Devon Great Consols, Oct. 7, 1879.

After a careful survey of this property I beg to hand you my report thereon. The mine is situated in the parish of Tavistock, in the county of Devon, and in the immediate locality of all the productive mines of the district, being bounded by Wheal Crebor on the north, on the north-east by Crowndale, on the east and south-east by Devon and Courtenay, on the west by East Wheal Russell, and on the south-west by Devon and Cornwall United Mines, all of which have proved productive; and Devon Great Consols and Bedford United Mines are within a comparatively short distance to the north-west.

There are several lodes comprised within the limits of the set presenting very encouraging appearances. Two only of these lodes have been tried, and the workings upon these are not upon a very extensive scale.

An adit level has been driven some 300 fms. on the course of one of the lodes, which produced some good quality copper ore, and shows evident signs of increased quantities underneath. An engine-shaft has been sunk below the adit level 16 fms., where the lode has been intersected by cross-cuts and driven upon westward. In the course of this drive, about 35 fms. west of the cross-cut, another lode bearing on a different degree was met with intersecting the first lode driven upon obliquely. At this point a drive was commenced on the caunter lode, and for several fathoms in length it proved highly productive, the returns of copper ore from this lode at this very shallow depth amounting in the aggregate in value to about £3000 at the then very low price of copper. A further and deeper development of this very important and valuable part of the mine cannot be too highly recommended, as the meeting with further good discoveries are, in my opinion, beyond a doubt.

The other lodes which have been opened upon by shodding and shallow workings are of a highly promising character, and being embedded in the same channel of ground as that in which all of the ore-bearing lodes in the district are found, I have no doubt that a trial of these lodes in depth will also be attended with good results.

This property has the advantage of water-power for hauling, dressing, and other purposes; the distance from the shipping port of Morewellham is only about 2½ miles, where the ores are sampled and shipped, and there is railway communication at Tavistock, only about 2½ miles.

An engine is already on the mine, with the necessary appliances, dressing-floors are laid out, and carpenters' and smiths' shops are erected. There are also various materials, which will be found of a very useful description in the further prosecution of the workings.

ISAAC RICHARDS.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE ACTIVITY STEAMSHIP COMPANY (an Unlimited Company).—Capital 16,000l., in shares of 25l. 7s. 6d. To acquire by purchase or otherwise steamships for the purpose of carrying mails, passengers, and cargoes from and to ports of Great Britain. The subscribers are—E. D. Hunt, Cardiff, 38; T. R. Thompson, Cardiff, 15; L. Wood, Cardiff, 4; W. Taylor, Cardiff, 2; E. F. Sladon, 1; L. R. Thompson, Pontypridd, 2; C. H. James, Merthyr, 2.

LOYD'S IRON CASK WORKS (Limited).—Capital 20,000l., in shares of 25l. To make, buy, and sell casks, drums, kegs, &c., for oils, paints, and other liquids. The subscribers (who take one share each) are—A. P. Hutchinson, 229, Upper Thames-street; J. W. Shingley, New Cross; J. A. Lloyd, Bush-lane; A. Lloyd, Limehouse; J. H. Colborne, 21, Burgess-street; F. T. Lloyd, 22, Locksley-street; J. Brown, Liverpool.

DONALD MACKINTOSH AND COMPANY (Limited).—Capital 20,000l., in shares of 20l. To adopt and carry out an agreement made between D. Mackintosh and the company, and carry on the business of quarrymasters, paviors, stonemasons, &c. The subscribers are—D. M. Brinscall, Liverpool, 200; J. Dewhurst, Preston, 25; C. Cranshaw, Wigan, 50; J. Tarbrick, Wigan, 25; S. Haworth, Tyldesley, 25; J. Kershaw, Tyldesley, 25; C. Wood, Wigan, 25.

THE COMMERCIAL PAPER STOCK COMPANY (Limited).—Capital 40,000l., in shares of 10l. To buy and sell all kinds of materials for the making of paper. The subscribers (who take one share each) are—W. Jolliffe, Liverpool; W. Williams, Liverpool; W. A. Matheson, Liverpool; E. T. Gibson, Liverpool; A. F. Cain, Liverpool; M. Herschell, Liverpool; T. Huntington, Liverpool.

THE AUSTRALIAN LAND AND PASTORAL COMPANY (Limited).—Capital 500,000l., in shares of 25l. To purchase or otherwise acquire certain extensive lands situate in Queensland, and to carry on the business of a land and pastoral company in all its branches. The subscribers are—J. L. Montefiore, Upper Norwood, 20; P. Carnegie, Upper Norwood, 20; W. H. Maturin, 5, Courtfield Gardens, 20; J. A. Bell, 98, Jermyn-street, 20; M. Bell, Fort St. George, Gloucestershire, 20; H. Hughes, 2, Blackheath-terrace, 20; E. E. Lawrence, 1, Royal Exchange Buildings, 1.

SINCLAIR'S AERATED WATER COMPANY (Limited).—Capital 20,000l., in shares of 5l. To manufacture and generally carry on the business of selling aerated, mineral, and other kinds of effervescing waters. The subscribers (who take one share each) are—H. R. Gooch, 102, Cannon-street; R. C. Sinclair, Atherston; A. Thacker, Lee; W. Almond, Birmingham; J. Brown, 67, Angus street; E. James, Twickenham; J. B. Tippetts, 4, Great St. Thomas the Apostle.

BRITISH ISRAEL IDENTITY CORPORATION (Limited).—Capital 10,000l., in shares of 1l. To establish publishing offices for the sale of all books and works bearing on the identity of the British nation

with lost Israel. The subscribers are—E. Hine, Ealing, 10; A. J. Stephenson, Woolwich, 50; I. Loveland, Shoreham, 50; W. Evans Plumstead, 5; J. Alexander, 103, New Kent-road, 5; J. Unwin, Sheffield, 5; H. H. Rugg, 1, Grove-road, 2.

SYNCHRONOME CLOCK AND ELECTRO-MAGNETIC MOTOR COMPANY (Limited).—Capital 20,000*l.*, in shares of 2*l.*. To purchase or otherwise acquire, develop, and carry on the manufacture of clocks of every description, and for converting electric force into motive power. The subscribers are—H. Port, Birmingham, 250; J. Austin, Birmingham, 50; J. Skelchley, Birmingham, 50; H. Horton, Birmingham, 50; W. Austin, Birmingham, 50; G. Bats, 147, Dynevor road, 10; T. Varley, Walthamstow, 250.

MASONIC HIGH SCHOOL COMPANY (Limited).—Capital 5000*l.*, in shares of 10*l.*. To establish a school or schools for the purpose of preparing the sons of Freemasons or other persons for commissions in the military or civil service. The subscribers are—J. de Orellana, 32, George-street, 10; M. A. Cuffe, 18, Longridge-road, 2; G. Temple, 175, Ladbroke-grove-road, 2; R. A. D. Naguer, 44, Cathcart-road, 2; F. Nags, Herne Hill, 1; W. M. Acworth, Lordship-lane, 5; S. P. Day, 5, Hardwick-place, 2.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Having a mine inspected is one of the privileges of shareholders; and it is one that we have always ourselves advocated. But it may be turned to a damaging and intolerable abuse. At Wheal Crebor Tuesday in each week is set apart for inspection, and thus for five days a month the works of the mine are interrupted for the mere purpose of gambling operations in the share market. A jobber in shares may be a "bear" of hundreds—that is, may have sold hundreds more than he possesses—but if he has one share in his name he can obtain an order to inspect, and send his agents instructions to do so. Many do this, and on Tuesday mornings there is a race among these agents from Tavistock to the mine, a race down the ladders, a race to look at the lode, a race up again, a run back to Tavistock, and a wire to London. If the lode in the 108 or 120 has fallen off telegrams to that effect reach the Stock Exchange and the mining market. These are flourished about, and, like the story of the three black crows, get magnified, until at last it is said the ore is altogether cut out; then the panic which the "bears" intended to produce sets in, and the property of the *bona fide* shareholders is depreciated 30,000*l.* Now, in a cost-book mine the majority governs, and it may be a question for the next meeting to decide how far these inspections for mere gambling purposes should not be limited to once a month. The committee would, of course, have it in their power to allow any *bona fide* holder to have an inspection oftener if needed. What is here going on in Crebor is just a repetition of what went on at East Caradon, when shares rose from 1*s.* 6*d.* to 10*l.*, and we supported what we conceived to be right then as we do now, and we had the satisfaction to see the "bears" punished, and the shares at 50*l.* We invite the opinion of shareholders on the inspecting question.

PARYS CORPORATION.—Should copper ore rise to 15*s.* per unit we are now informed officially this mine could return 200 tons per month from the present reserves alone. This would have a good profit, and is a speculation with the present price of shares, without reference to the 90 cross-cut south. The mine sold upwards of 50,000*l.* worth of ore when copper was up before, and may do so again. The unit we believe is now about 12*s.*

The position of East Caradon is this:—In South Caradon most of the ore now raised is coming from a great shoot of ore approaching East Caradon boundary; three or four levels are in it, all rich, and some of these within 80 fms. of the boundary. At East Caradon, therefore, the hope is that this shoot of ore will hold into that mine, and a winze is in course of sinking below the 150 upon what is considered to be the South Caradon lode. This winze is going down in good ground, and water is coming up freely from the bottom, which is a good sign. Should ore be touched shares would rise rapidly.

Aberllyn has sampled this month 50 tons of blende.

D'Esby Mountain has sold 25 tons of blende at 3*l.* 0*s.* 6*d.*, and now dressing lead again.

In clearing the road side shaft at Clementina the agent thinks a splendid lode is dipping under the flat meadows (the spot we have always looked upon for success), and he hopes soon to get a good pile of lead from it.

PANDORA.—We bought shares here at 1*l.* each, and still hold them, and have a high opinion of the mine.

We have always expressed the opinion that a large deposit of mineral, probably copper, would be found under the blue stone at Morfa Du, and the agent now writes that indications of copper are getting stronger in the shaft, and there is carbonate of copper to be seen with the bluestone.

South Darrens are likely to go better. Derwents are also improving.

EAST CREBOR.—We have received a plan of this mine, together with several reports. It seems the shaft is down below the 77, and has to be sunk 5 to 10 fms. to reach the junction of the north with Wheal Crebor south lode. Captain Goldsworthy, writing when the shaft was down to the 60, reported "there were two copper lodes from which large returns of rich copper ore had been made. These two lodes will form a junction at about 15 or 20 fms. sinking, at which junction great results are expected to be realised." Since that report the shaft, it would seem, has been sunk 17 fms., and the present company should continue it at once. One report states that there is a large quantity of ore in the 50 fm. level. The ore was the richest in the district, and the mine sold altogether about 40,000*l.* worth. The present company have 600*l.* in hand, and if they succeed in getting a grant of water for a wheel they may have a good mine cheaply worked. Herodsfoot best ore used to fetch 18*l.* to 20*l.* per ton; and even when the price dropped so that other mines were getting 8*l.* Herodsfoot got 13*l.*, and the present rise is very important to it. When the shaft gets down to another level the returns may greatly increase.

SOUTH FRANCES.—It has been denied that the workings of this mine have been carried beyond the boundary; but while other tin mines advance this one, for some reason or other, recedes.

PENSTRUTHAL.—So far as we can learn, a company is in course of formation to work this property in a comparatively small number of shares, which will be offered in the first instance to the old shareholders at a low price. There is no better speculation in Cornwall than the south part of it; and no time should be lost.

We cannot answer the question as to the rule of the Stock Exchange referred to. This reply also refers to several communications we have received this week upon subjects that we do not feel either called upon or willing to enter upon in this column.

SATURDAY, OCT. 11.—Market for tin shares very flat, and prices generally lower. Wheal Crebor firm at quotations. Carn Brea, 42½ to 47½; Dolcoath, 40 to 42½; East Lovell, 3½ to 4½; South Condurow, 12½ to 13½; South Frances, 9½ to 10½; Tincroft, 11½ to 12½; West Basset, 7½ to 8½; West Frances, 7½ to 8½; Basset, 2½ to 3½; Grenville, 4½ to 5½; Parys, 13½ to 14½; Crebor, 4 to 4½; Roman Gravel, 9 to 9½; Tankerville, 4½ to 5½; Van, 17 to 18; Great Laxey, 17 to 18; Devon Great Consols, 5 to 5½; Parys Copper, 13s. to 15s.; West Tolgus, 26 to 28; Leadhills, 2½ to 3.

MONDAY, OCT. 13.—Tin shares rather quiet. Van, Great Laxey, West Chiverton, Leadhills, and Tankerville firm. Van, 18 to 19; Great Laxey, 17 to 18; West Chiverton, 4 to 4½; Tankerville, 4½ to 5½; Leadhills, 2½ to 3½; Herodsfoot, 2½ to 2½; Carn Brea, 42½ to 47½; Dolcoath, 40 to 42½; South Frances, 9½ to 10½; Tincroft, 12 to 13; West Basset, 8 to 8½; and firm; West Frances, 9 to 10, and very scarce; Basset, 3 to 3½; Grenville, 4½ to 5½; Parys, 13½ to 14½; East Van, 2½ to 2½; Roman Gravel, 9 to 9½; Crebor, 3½ to 4½; Marke Valley, 1 to 1½; Cape Copper, 29 to 30; Eberhardt, 2½ to 2½; Don Pedro, 12s. to 14s.; Richmond, 7½ to 8.

TUESDAY, OCT. 14.—Market for tin shares very firm at advanced prices. Carn

Brea, 48 to 51; Dolcoath, 45 to 50; South Condurow, 15 to 16; South Frances, 10 to 10½; Tincroft, 13 to 14; West Basset, 10 to 11; West Frances, 10½ to 11½; Agar, 4 to 4½; Kiddy, 2 to 2½; Parys, 14 to 15; Van, 19 to 21; Great Laxey, 17 to 18; Roman Gravel, 9½ to 10; East Caradon, 17s. 6*d.* to 22s. 6*d.*; Leadhills, 3 to 3½; Devon Consols, 4½ to 5½; East Lovell, 3½ to 4½; East Van, 2½ to 2½; Herodsfoot, 2½ to 2½; Mellanear, 3½ to 4; Parys Copper, 13s. to 15s.; Tankerville, 4½ to 5½; West Chiverton, 4½ to 4½; West Seton, 45 to 50; Crebor, 3½ to 4½; Cape Copper, 29 to 31; Don Pedro, 12s. 6*d.* to 15s.; New Quebrada, 2½ to 2½; Richmond, 7½ to 8; Santa Barbara, 32s. 6*d.* to 37s. 6*d.*

WEDNESDAY, OCT. 15.—Market very active for tin, copper, and lead shares at advanced prices. Carn Brea, 50 to 55; Dolcoath, 47½ to 52½; South Condurow, 14½ to 15½; South Frances, 10 to 11; Tincroft, 15 to 16; West Basset, 10 to 11; West Frances, 11½ to 12½; Agar, 4½ to 5; Grenville, 5 to 5½; Parys, 16½ to 17½; Devon Consols, 4½ to 5½; East Caradon, 1½ to 1½; East Van, 2½ to 2½; Glenroy Lead, 7s. 6*d.* to 12s. 6*d.*; Great Laxey, 17½ to 18½; Herodsfoot, 2½ to 3; Leadhills, 3½ to 4; Marke Valley, 1½ to 1½; Mellanear, 3½ to 4; Morfa Du, 15s. to 17s. 6*d.*; Parys Copper, 14s. to 16s.; Roman Gravel, 10½ to 11; South Caradon, 50 to 55; Tankerville, 5 to 5½; Van, 20 to 22½; West Chiverton, 4½ to 4½; West Seton, 50 to 52½; West Tolgus, 24 to 26; Crebor, 4 to 4½; Uney, 1½ to 1½; Panullicio Copper, 2½ to 3; Eberhardt, 2 to 2½; Cape Copper, 29 to 31; Richmond, 8½ to 9½.

THURSDAY, OCT. 16.—In consequence of a further rise in the metal market tin, lead, and copper shares are in good demand at advanced prices. Carn Brea, 52½ to 57½; Dolcoath, 50 to 55; East Lovell, 3½ to 4; South Condurow, 15 to 16; Tincroft, 18 to 19; West Basset, 10 to 11; West Frances, 11 to 12; Agar, 4½ to 5; Kiddy, 2½ to 3; Parys, 17 to 18; Clementina Lead, 1 to 1½; East Van, 2½ to 2½; East Caradon, 25s. to 35s.; Great Laxey, 17 to 18; Herodsfoot, 2½ to 3; Leadhills, 3½ to 4½; Marke Valley, 1½ to 1½; Parys Copper, 15s. to 17s. 6*d.*; Roman Gravel, 11 to 12½; Tankerville, 5½ to 5½; Van, 22 to 24; West Asheton, 22s. 6*d.* to 27s. 6*d.*; West Chiverton, 5 to 5½; West Seton, 47½ to 52½; Basset, 3 to 3½; Crebor, 5 to 5½; Uney, 22s. 6*d.* to 27s. 6*d.*; Devon Great Consols, 4½ to 5½; Mellanear, 3½ to 4; West Tolgus, 24 to 26; Eberhardt, 2½ to 2½; Cape Copper, 30 to 31; Panullicio Copper, 3 to 3½; Richmond, 8½ to 9; Frontino, 2½ to 2½; Don Pedro, 12s. 6*d.* to 15s.; Santa Barbara, 32s. 6*d.* to 37s. 6*d.*

FRIDAY, OCT. 17.—Market for tin shares easier. Lead and copper very firm. Carn Brea, 52½ to 57½; Dolcoath, 47½ to 50; South Condurow, 14 to 15; South Frances, 9½ to 10; Tincroft, 18 to 19; West Basset, 9½ to 10; West Frances, 12 to 13; Agar, 4½ to 5; Basset, 3½ to 4; Grenville, 5 to 5½; Parys, 16 to 17; East Lovell, 3½ to 4½; Roman Gravel, 12 to 12½; Van, 21½ to 22½; Great Laxey, 18 to 19; East Van, 2½ to 2½; Herodsfoot, 2½ to 3; Leadhills, 4 to 4½; Tankerville, 5 to 5½; West Asheton, 25s. to 30s.; West Chiverton, 5 to 5½; Devon Consols, 4½ to 5½; East Caradon, 20s. to 25s.; Mellanear, 3½ to 4; Marke Valley, 20s. to 25s.; Parys Copper, 15s. to 17s. 6*d.*; South Caradon, 55 to 60; West Seton, 45 to 50; West Tolgus, 24 to 26; Crebor, 4½ to 5½; East Crebor, 25s. to 35s.

MR. WILLIAM H. H. WATSON, DEALER IN RAILWAY STOCKS AND MINING SHARES AT NET MARKET PRICES, IS A BUYER OF WHEAL CREBOR, PANDORA, COMBARTIN, AND PARYS MOUNTAIN.

Address: W. H. H. WATSON, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Oct. 11: Produce for the month of September, 34,000 o*z.* = 13,175*l.*; yield, 7 o*z.* per ton. Cuibá: 200 tons stamped in 15 days; yield, 2 o*z.* per ton.

DON PEDRO.—Capt. Vivian, Sept. 18: Mine—New Lode at Bryant's: The stopes and ground opened at the outcrop measure 15 fms. 1 ft. on the line of dip, which is in a westerly direction. At present the stopes altogether are 27 ft. width from north to south; the lode and lode is about 13 ft. thick, which is still in a very crushed state, caused by the old workings below. The firmest part of the lode is to the south of No. 3 stope, where we intend to explore further. Owing to the crushed state of the ground no boxwork has been obtained. In Nos. 1 and 2 incline shafts we have still a large force employed, and work is being carried on the whole time with vigour, with a view of getting to the bottom of the mine as early as possible.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, on furnace, \$30,000, from 520 tons of ore. Refinery, \$40,000.

SEMPER.—Since my last report on the mine, have been carried on with usual regularity. The drift from the 200 cross-cut has been advanced 11 ft. without any material change in the ground. The 600 west drift has been advanced 10 ft. in the present end. We have encountered a small cave with low-grade ore in bottom and sides; this is a very favourable indication for striking ore. The 600 west drift, from south fissure drift, has been advanced 17 ft.; the present end is in low-grade ore and galena, and is looking very promising. The rise in the back of the 600 is now up a total distance of 52 ft. in the same character of ground, which is still very favourable. The 600 winze is now down a total depth of 130 ft.; this winze is being sunk on an angle of 27°. The bottom of the winze is in ore, at times we find some very good ore, but the greater part of it is of low grade. It is gradually improving, and according to present indications we are near a large ore body. The 800 west is without change since my last. The ore chambers are turning out the usual quantity of very fair grade ore.

CHONTALS.—W. White, Sept. 5: Total quartz treated for the month of August, 1750 tons, which produced 395 o*z.* of gold, or an average of 4½ dwts. per ton. Value of the gold, 1080*l.*; cost at the mines for the month, 793*l.*; profit, 287*l.*. The weather during the last week has been generally dry, but the water from the dam keeps the 24 shafts regularly at work, and everything is going on well. San Sebastian: Stopped from back of lode near entrance to main level 277 varas; here the lode is become small and of no value, but 50 varas east of this stopes I have put up a new rise 20 varas and holed to surface, and which has laid open some new stopping-ground that I think we shall be able to work at a very fair profit. Stopped from No. 2 stopes, 70 varas; stopped from No. 3 stopes, 23 varas. Drove shallow level east and west of ventilation rise, 10 varas. Drove east of eastern rise, 14 varas. Stopped from west of rise, 39 varas. Total quartz mined, 1300 tons, or 1300 tons, worth an average 4 dwts. to the ton. Also brought out from the different places in the mine 60 sets of timber, and 100 sets of timber in the main level, between the other timber, as the ground over the back became very heavy after the rain. The level is kept in good condition, and the mine throughout in good working order. Estrella Mine: Rose in new rise 13 varas; lode, 3½ ft. wide, worth 4½ dwts. to the ton. Stopped from No. 1 stopes, 150 varas. Stopped from No. 2 stopes, 46 varas; in the latter stopes the lode has been hard during the month and spare for breaking, but this can only be transitory, as the main level passed through the same bar, and is now in ground good for progress. Drove main level 7½ varas; here the lode has me to go into a lengthy exploration, and I wish to show every indication of opening out a good and profitable mine. Total quartz raised, 564 cars, or 500 tons, worth on an average 5½ dwts. to the ton; also brought out from the different places in the mine 62 cars of timber, and put 36 sets of timber in the main level, which is kept in good condition, and the mine throughout in the best working order.

BIRDSEY CREEK.—G. S. Powers, Sept. 20: Since my last we have been washing with South Yuba water until the 18th inst., at which time it was turned off. We are now cleaning in bed-rock and cuttings over, and shall hope to get all cleared by Oct. 20, at which time I did not expect at all success. The result is I cannot account for the miserable failure, unless the powder came in contact with an old breasting. We have not washed away nearly half of the blast yet, and so of course cannot tell positively. We are preparing to take the supply pipe in Neece and West down in a new place, thereby shortening the distance several hundred feet. It will be absolutely necessary to have considerable new supply pipe, which I shall arrange to get and make on the claims as soon as clearing up; there will also be some ditch repairs, &c., that will be attended to in due time. I will report as soon as through cleaning in, but fear that the result will not prove as satisfactory as anticipated, owing to the roughness of last blast.

BLUE TENT.—D. T. Hughes, Sept. 20: Set off another small blast with 38 lbs. of powder on the north side of the pit at South Yuba claim on the 18th inst. with most excellent results; the powder drifts for our next big blast are progressing favourably, and will soon be completed and ready to construct the powder-chambers. We used all the available water to good advantage during the whole week.

EBERHARDT AND AURORA.—Frank Drake, Sep. 16: In accordance with your request, forwarded to me in your No. 212 letter of June 21, I have had a careful survey of the tunnel made by Mr. T. G. Read, showing the different formations and stratifications that the tunnel has passed through in its course of progression, and have had the same delineated upon a map of the same scale as the one you have in your offices—150 ft. to 1 in. On the map there is shown a plan, cross-section, and longitudinal section. You will also observe the Eberhardt drift, the stratification of the rock, and its character, and a cross-section at point of raise marked K. All the workings of the tunnel and drift are so distinctly laid down and shown upon the map that I do not think it necessary for me to go into a lengthy explanation of it. I wish to call your attention to more particularly to that section of ground commencing at the break in the John Wild North, about 2000 ft. from the mouth of the tunnel, and extending for about 1200 ft. along the tunnel to the large clay seam. On the map this piece of ground is designated as broken line and spar ledge matter. This is a very valuable piece of ground, and without doubt there can be found ore in paying quantities. The only prospecting work that has been done in this ground other than the work of driving the tunnel is the small drift running east of the tunnel, and from this drift I took the rich ore samples shown to you on my visit to your office. During the time the mine was running in 1878, there was taken from the abandoned drift 3235 lbs. of ore, which was worked in the mill. Assay value of 973-67, or per ton \$45-53; could we procure ore in large quantities of this grade there could be made a good profit. At points in this ground (marked vughs on the map) there are equally as good indications of ore as at the point where the drift has been run. I beg to call your special attention to this portion of the tunnel, for I firmly believe that with a small amount of expenses there could be ore procured in paying quantities, and further, after the careful survey that has been made, and representing the different slips and breaks through which the tunnel and drift have passed, it is not impossible, and I think altogether probable, that the clay seam crossing the tunnel just beyond the Grant and Colfax Patent is what has been considered the north wall of the Eberhardt Mine. And the drift which I have run from this mine has been run under or north of the wall only at a point when we struck it near the raise.

It looks very much as though that the hill upon which the Eberhardt Mine is located has broken off and slipped down south from the main hill, carrying the channel with it to the south, and at the same time that portion of the ore channel containing the Eberhardt Mine has dropped down and moved to the westward, making a fault of some 400 ft. west. The southern end of the ore channel at the John Wild North has retained more or less of its original position, and really that portion of ground lying between the John Wild North and the clay seam is identical with that in which we had our large ore bodies in the North Aurora and Ward Beecher Mines. This may not be a correct conclusion, but the work that has been done in the main tunnel, and the character of ground through which the Eberhardt drift has been run, show conclusively to my mind that this is the real position of this ore channel. I am more than ever convinced that the break which we came upon in the Eberhardt drift is the same as the clay seam crossing

the main tunnel, and that it is the continuation of the keystone wall. Just west of the El Dorado Company's Patent ground there is a location called the "key-stone," owned, and is now being worked, by a New York company of corporation with quite good success; they are taking out some very rich ore. They are sinking down upon an incline which is pitching under the El Dorado claim, and toward the tunnel. This, together with the surface indications of the El Dorado and Indianapolis is sufficient to convince any reasonable mining man that there must be large bodies of ore very near the line of our tunnel. I have marked the point of our driving in main tunnel on map, September 13. The work is progressing well, but the rock in character has not materially changed; at times it is very difficult to say whether it is shale or lime—at the present time the rock is very hard to drill, but breaks well. The great question is—does this stratum of shale underlie Treasure Hill. The tunnel now being run by the Henry Tunnel Company from the east side of the hill (Applegarth Canon) has been driven through shale about 300 ft., but they are now in limestone, which would indicate that the shale does not continue under the hill to any great extent; this cannot be fully determined without a continuation of our work. The manager of the Henry Tunnel Company says "that his company propose to continue their tunnel for 3500 ft., should they not strike ore before this distance is reached." I feel that it is a timely use for me to urge upon the company the great necessity of their continuing the tunnel to the South Aurora ground, for you have doubtless ere this received the report of Mr. R. J. Frecheville, and have acted upon it, and I am anxiously awaiting to receive your conclusions.

I was very much pleased to meet Mr. Frecheville. He took a great interest in looking into the finances here of the company, as well as the working of the tunnel and tailings. I am satisfied that he esteemed it of the greatest importance that the company should extend operations if possible. I further beg to state that Mr. O. Drake is running the mill upon tailings. During the month of August he worked about 1000 tons. This month he will work over double the amount owing to his running the 16 pans, whilst in the previous month he worked but 12 pans upon the tailings, four pans having been used for working tribute and custom ore, of which I will give you a full account in my September accounts. I trust that the map will meet with your satisfaction, and that I shall soon receive word from you to continue the tunnel.—(The directors beg to state that the whole debenture stock has been taken up by the shareholders, and the maps referred to in Capt. Drake's letter have arrived.)

COPALCO—DULCINEA MINE.—J. H. Vivian, Aug. 31: Fletcher's lode to sink below the 160, by six men; the shaft being about 4 metres to the east of the lode we shall not ascertain its value until we reach the 170, which will take us two months more to accomplish, but judging from the productiveness of the lode at the 160, I have not the least doubt but that we shall find it rich after we have sunk the required depth. The 160, to drive north of shaft; this end is disordered at present by one of a series of branches of iron, which we find occasionally crossing the lode, and which disarranges it for a short distance. The lode is 3 feet wide, but principally of iron. Its presence, however, is a good indication for making ore of copper in this mine. The lode is 4 ft. wide, and yields 2 tons of ore per fathom. The 150 to drive south; the end is disordered at present by one of a series of branches of iron, which we find occasionally crossing the lode, and which disarranges it for a short distance. The lode is 3 feet wide, but principally of iron. Its presence, however, is a good indication for making ore of copper in this mine. The lode is 4 ft. wide, and yields 2 tons of ore per fathom. The 150 to drive south; the end is disordered at present by one of a series of branches of iron, which we find occasionally crossing the lode, and which disarranges it for a short distance. The lode is 3 feet wide, but principally of iron. Its presence, however, is a good indication for making ore of copper in this mine. The lode is 4 ft. wide, and yields 2 tons of ore per fathom. The 150 to drive south; the end is disordered at present by one of a series of branches of iron, which we find occasionally crossing the lode, and which disarranges it for a short distance. 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BANKERS:

LONDON AND WESTMINSTER,
LOTHBURY.

Llanbadarnfawr Lead Mine Company (LIMITED).

Capital £20,000, in 5000 Shares of £4 each.

3875 of which will be denominated A Shares, and will be liable to calls, and 1125 of which will be denominated B Shares, and be issued as fully paid-up to vendors of the property.

£1 payable on application and £1 upon allotment. In case of no allotment, all moneys will be returned in full. No calls to be made within six months after allotment.

AUDITOR (AND ACTING SECRETARY, PRO TEM.)—MR. E. L. ERNEST.

OFFICES,—4, QUEEN STREET PLACE, CANNON STREET, LONDON, E.C.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of purchasing from the present holders the Llanbadarnfawr Mining Sett, and by proper application of capital developing the evident great resources of the property, which it is confidently believed by the best scientific authorities must yield great returns to the investors.

The property is situated in Cardiganshire, on the estate of Sir Pryse Pryse, some eight miles from the shipping port of Aberystwyth, and in the heart of the richest cluster of lead mines in the United Kingdom.

It has an area of one mile in length upon the run of the lodes, with about half a mile of breadth, and the turnpike road to the port forms one of the boundaries of the sett—a very great advantage in itself, the cost of carriage being much reduced thereby.

There is every reason to believe that this mine will prove one of the great prizes of this noted country. The fact of its position—viz., in the immediate neighbourhood of the best and richest mines of the past and present—would alone be sufficient to warrant its energetic working, but in addition the incoming shareholders will reap the advantage of the property having to a great extent been proved for them, and proved sufficiently to amply justify the purchase, and the application of the necessary capital to continue the work already commenced. During the development there will be good returns, and every day's work will show the mine growing richer in productiveness, and on the road to rival the best of its valuable neighbours.

An engine-shaft has been sunk 30 fms. from the surface, and levels driven at 20 and 30 fms. east and west. The 30 fm. level has been driven into a splendid lode, and it is only necessary to examine the ore hauled from this level and now lying at surface to be convinced that a great and profitable mine is in store here. In the adit level a valuable discovery of fine ore has been made, spotted with copper, just at the point of junction of two lodes, and the lode in the level west of the south cross-cut has been proved of excellent value, even at this early stage.

The mine has the great advantage of ample water power for raising, crushing, and dressing the ore, and thus a saving of a large outlay, &c., for steam-engines,

is effected; water courses have been already made, bringing the water into the sett. Water power is one of the rare features in mining, and one that cannot be too highly appreciated.

There are the following necessary adjuncts for working on the mine, which with a moderate outlay can be made sound and good—viz., a 30 ft. diameter water-wheel sunk in a 40 ft. pit, built in a thoroughly substantial manner, with bobs, travellers, and rods from wheel to shaft, pulleys, stands, &c., 60 fm. pumps, drawing machine fixed, &c.; there are also smiths' and carpenters' shops, store house, offices, &c.

From the position—some half mile south of the celebrated Goginan, and as before stated surrounded by all the richest mines of the district—and character generally of this property, it is not too much to claim for it that it is undoubtedly the best and most promising mine that has been offered to the public for many years. The proposed capital and purchase money bear but trifling comparisons to what is evident the property is capable of becoming under good management and with sufficient working capital, and it, therefore, offers an excellent opportunity for investing money with confidence.

The mine as it stands with plant, &c., takes note for two years, with liberty at any time to take up lease for twenty-one years, subject to minimum rent of £25, merging into dues of one-sixteenth, the company has agreed to purchase for £3500 in money, and £4500 in paid-up shares. This moderate and reasonable price will leave ample capital for the development of the mine, and the directors will see that the money of the shareholders is applied justly and judiciously to the working of their property.

It is confidently anticipated that no further call will be required, but that, on the contrary, the amount proposed to be called up will be more than sufficient to develop the property, and bring the shares to a large premium.

Prospectuses, plans, contracts, Memorandum of Association, &c., can be had, and contracts seen, at the offices of the company.

Mining Correspondence.

BRITISH MINES.

ABERLYN.—J. Roberts, Oct. 15: The men at Valley cross-cut, at the rise in deep adit and the winze in bottom of No. 2, have been engaged most of the week in bringing down the stone-breaker from the top of the mountain, and there is no change in those places for that reason. The No. 2 cross-cut is without any change to notice. The stopes at No. 2 in the great lode are producing good blende, especially on the heading side. On the shale lode we are opening along-side of the lode, so as to take it down free from the shale.

BETWIS-Y-COED.—Charles J. Sims, Oct. 16: On Saturday last we set the following bargains:—The 30 to drive west of flat-rod shaft, by four men, at 5s. per fathom; the 10 to drive east of the lode, at 5s. per fathom; the 10 to drive east of flat-rod shaft, by four men, the month, at 5s. per fathom; lode worth 15 cwt. of lead ore to the fathom. In the deep adit level we have set to two men, at 4s. per fathom, to drive east on a portion of the lode producing good saving work, and we calculate to hole to an end that was driven west some time since in this north part in about 10 fms. driving. No. 1 stop in the back of the deep adit level set to two men, the month, at 17s. 6d. per fathom; lode worth for lead ore 25 cwt. per fathom. No. 2 stop in back of deep adit level set to two men, the month, at 17s. 6d. per fathom; lode worth for lead ore 20 cwt. per fm. No. 3 stop in back of shallow adit level set to two men, the month, at 22s. 6d. per fathom; lode yielding 20 cwt. of lead ore per fathom. No. 4 stop in back of shallow adit level set to two men, the month, at 14s. per fathom; lode yielding 20 cwt. of lead ore per fathom. All the machinery is working well, and we have to-day sold to the Runcorn Smelting Company 30 tons (computed) of lead ore, at 104. 10s. per ton, which we are carting to the station. Two of our largest shareholders were here yesterday, and expressed themselves as being highly pleased with the progress that is now being made.

BODIDRIS.—H. Hotchkiss, Oct. 15: I have nothing new to report in our underground workings. We are raising splendid quality lead ore from the different points upon the Mac-y-pwll lode, and we have about 30 tons of lead ready for market. We have commenced to clear up and re-wall the Meadow shaft preparatory to sinking into the bottom limestone measures, where we have every reason to expect to cut the Mac-y-pwll lode still richer than in the upper measures.

CAMBRIAN MINES.—Capt. T. Glanville, Oct. 11: **ESGAIR-FRAITH:** Eastern Shaft: We have commenced to sink below the 85 yard level by the side of the course of copper. Our object in doing this is to get the shaft down for another level as quickly as possible. In the 85 yard level east we are driving on the soft part of the lode, which is yielding 1 ton of copper ore per yard. When this level is advanced another 5 yards we shall cross-cut north and south to see its width and value. In the stopes in back of the 55 yard level, east of shaft, we have a lode producing 3 tons of copper ore per yard. The stopes in the back of the 70 yard level will yield 3 tons of copper ore per yard. The 70 east will produce ½ ton of copper ore per yard. The lode in the 45 yard level, east of shaft, is composed of gossan, intermixed with fine stones of green carbonate of copper. The rise in the back of the 45 yard level, east of shaft, is producing good stones of copper, intermixed with gossan.

CLIMENINA.—J. Roberts, W. Sandoe, Oct. 15: Monthly Report: Engine-shaft: At the bottom level we have driven north nearly 4 fms. through or on the top of a very kindly lode, and which has produced some good saving work for lead. We have about 5 or 6 fms. further to drive to reach the run of lead ground that was worked on in the 15 fm. level, and we have every confidence that this end, when extended so far, will be as rich as the 15 was. The south end has been driven, by two men, about 14 ft.; the lode here seems to be widening out a little as it did in the level above. We have several fathoms to drive to strike the run of ore ground gone down in the bottom of the 25s. We have commenced stopping on the east and west lode at the 25s. and the lode, although small, is very good. Roadside Shaft: We have forked out the water from here, and very nearly cleared the bottom. As far as we can see of the last sinking of the shaft, it appears to have been in a poor neck of ground; but the principal lead ground seems to be dipping eastward under the flat meadows. We are now clearing the level, and it seems to us, although we cannot now speak definitely, that we have a splendid lode. When we have cleared away more of the stuff we shall be able to see better, and will report the result. We have made a proper footroad through the old workings which we have cleared alongside of this shaft, securing free ventilation, beside safety in going up and down. We are expecting that before your next meeting we shall have a good pile of lead raised from this point. The water-wheel and pumps are working splendidly.

COMBARTIN.—John Harris, John Comer, Oct. 16: In the 12, north-west of winze, the lode is about 1 ft. wide, and at present is poor, the end being in a hard bar of ground, which is not the usual character of the killas about here, therefore we hope to see a change for the better very soon. In the 12 south-east end the lode is producing a little lead, but not enough to value. The lode in the north-west end adit level is large, fully 6 ft. wide, containing large bodies of quartz, with occasional patches of good silver-lead, which we are saving for dressing, but the lode has a most masterly appearance, and ought to be productive for lead somewhere about the locality. The ground in the adit cross-cut is highly mineralised with munda and spels of lead, accompanied by veins of limestone capels, which leads us to think we are approaching near Harris's lode. We are getting on with our dressing-floors as fast as possible, and we hope to be ready to commence dressing in about another week.

CROOK BURN.—W. Vipond, Oct. 11: The men are continuing the sinking of the shaft and timbering below the crib. I do not think they have done anything at the walling this week. They have a good deal of water (about 70 gallons per hour). They will finish off with the walling as soon as they have all thoroughly secured at the bottom.

DESHIRESHIRE CONSOLIDATED.—R. Prince, A. Francis, Oct. 16: The new north cross-cut is making very fair progress. The 112 east main lode continues to open out and improve. At the 112 east branch level we have placed four men to drive on a joint in the heading side of the vein, where there is a small rib of solid ore in the joint. In the 65 we are obtaining splendid lead ore, and think it will improve. We have loaded and sent off 10 tons of lead this week.

DERESBY CONSOLS.—J. Roberts, W. Sandoe, Oct. 15: We have no change to report in the end since last week. There are still branches of spar crossing the end, and the ground continues more favourable for driving.

DERESBY MOUNTAIN.—J. Roberts, William Sandoe, Oct. 14: During the past month we have succeeded in clearing the sump at No. 5, but with much difficulty, owing to the quickness of the water, which necessitated the use of two hand-pumps. After having cleared up all the stuff, we put the men for some days to work on the lode to prove it further than we could at first see it, and the result is the showing of a very fine lode for lead, the width of which we cannot say, because the sump appears to be in the middle of the lode, and no wall is anywhere shown. We can see, however, that the lode is 12 ft. wide, being cut through solid patches of lead ore in the bottom of the sump, and about 4 ft. wide. In the very bottom of the sump on the last day of working we holed to what we then thought was a large vug, or natural cavity, which is a depth of from 3 to 4 yards, but on opening the top of it we are rather inclined to think that it is an old working, which was worked from some point which we have not yet seen. In either case it does not affect our prospects very materially. If our latter impressions are correct, it is quite clear that the old men followed much better lead than we found in the bottom of the sump; and it has been our impression since we first discovered the old water-wheel that the sump we have cleared was not the last place they worked. We found it not only impracticable but impossible to continue the working with hand-pumps, so for a day or two we suspended the working, and put all our force to fix rods, &c., to the engine for the effectual keeping of the water. We are so far advanced with this work that we are expecting that we shall be able to start the pumping with the engine to-morrow. The stopes at No. 2 have been, and are still, looking very well. We have raised a nice pile of lead from here whilst we have been dressing up the parcel of blende which is to be sold to-morrow. The machinery is now operating on this lead, which will be brought into a marketable state soon. At the No. 4 we have a very

nice lode for blende, and which, we hope, by driving on will open out a good piece of stopping ground.

DERWENT.—J. Morpeth, Oct. 15: On the middle vein, east of Jeffrie's shaft, the several bargains are yielding 15, 12, 14, and 14 cwt. of ore respectively per fathom. West of shaft the respective yield is 14, 14, 30, and 10 cwt. of ore per fm.; and east of Westgarth's the yield is 24, 16, 12, 13, 13, 14, 22, and 20 cwt. per fm. respectively. In the 74, west of this shaft, there is no change. The 74 east on Sun vein at Jeffrie's shaft, keeps poor, and worth 9 cwt. per fathom. Pumping, drawing, dressing, and smelting all going well.

DEVON GREAT CONSOLS.—Isaac Richards, Oct. 16: Wheal Josiah, New South Lode Shaft: In the 130 west the lode is 1½ ft. wide, composed of capel, quartz, peach, munda, and a little copper ore. In the 115 west the lode is 2 ft. wide, composed of capel, peach, munda, and a small quantity of copper. Wheal Emma, Incline Shaft: In Dawe's cross-cut at the 190 the ground is without alteration since last report. In the 137 east, east of Friend's cross-cut, the drive is being carried by the side of the lode for more speedy progress. New Shaft, New South Lode: In the cross-cut north at the 205 the ground is favourable for driving, and good progress is being made. In the 190 east the lode, part carrying 5 ft. wide, is worth 3 tons of copper ore, or 9½, and 4 tons of munda per fm. In the 190 west the lode, 5 ft. wide being carried, is worth 2 tons of copper ore, or 6½, and 3 tons of munda per fathom. In James's rise in the back of the 190 east the lode, 5 ft. wide, being composed of capel, quartz, and copper ore, worth 1 ton, or 3½, and 4 tons of munda per fathom. In the 175 west the lode is 3 ft. wide, composed of capel, quartz, peach, munda, and a little copper ore of good quality. In Bartlett's winze in the bottom of the 175 west the lode, 5 ft. wide being carried, is worth for length of winze, 3 ft., 4 tons of copper ore, or 12½, and 4 tons of munda per fathom. In the 115 east the lode is 5 ft. wide, composed of capel, quartz, peach, fluor, munda, and some good quality copper ore. In the 100 east, on the south part of the lode, the lode is 3 ft. wide, composed of capel, quartz, munda, and a little ore of good quality. Railway Shaft: In the railway shaft sinking below the 175, the ground is favourable for progress. In the 175 east the lode, 5 ft. wide being carried, is worth 6 tons of copper ore, or 18½, and 4 tons of munda per fathom. In the 175 west the lode is 4 ft. wide, and worth 2 tons of copper ore, or 6½, and 2 tons of munda per fathom. At the 160, about 25 fms. east, the north part of the lode is being cut through preparatory to sinking a winze below this level, and so far as cut into 5 ft., it presents a very fine appearance, being composed of capel, quartz, peach, priam, and copper ore, worth 2 tons, or 6½, and 4 tons of munda per fathom.

DUBBY SYKE.—W. Vipond, Oct. 11: There is nothing new in the bottom of the shaft here. They began on Thursday to finish off the walling, and I expect they will complete this to-day, so there will be no further stop with the sinking.

CHIVERTON.—R. Southey, Oct. 14: Good progress is being made in sinking the engine-shaft to the 90, which will be reached by the time mentioned in my report at this meeting last month. I have no change to report in any of the other points.

EAST ROMAN GRAVELS.—Arthur Waters, Oct. 14: The south boundary engine-shaft is about 140 fms. deep, and now 97 fms. below the deep adit, which runs through the district. The 97 cross-cut is driven west of shaft 3 fms., but has not yet intersected the lode. The rock we are driving through is made up of hard slatey beds, and I am of opinion that the lode underlies more from the 85 downwards than it did above the level, hence the cross-cut may have to go 4 fms. to reach that object. There is a wide strong lode to be seen in the bottom of the 86, directly over the said 95 cross-cut, and I am hoping the last named will make a discovery of importance. The 86 is driven south of shaft 54½ fms., and the end should now be up to the commencement of the south run of ore seen in the level above. We have a good distance yet to drive to the shale here, hence I am still in hopes that we shall discover a profitable piece of ground as the end advances. The 75 south is driven 62½ fms., the last 15 fms. being on a strong ore lode, which will give fair stopping ground, the present forebore being worth 30 cwt. per fathom; lode about 3 ft. wide, very wet, and looks likely to soon further improve in value. The pitch in the back of said level following the end is set to four men, at 80s. per ton. No. 2 pitch to four men, at 75s. per ton, worth together 3½ tons per fathom. The 63 is driven south about 48 fms., but as there are no signs of the end being near the shale we consider it would be a good trial to resume driving in search of a shale bunch of ore. I would remark that this and the 75 end were suspended some considerable time ago at corresponding points, the motive being to reduce the cost for a time. Having resumed the driving of the 75 a few months ago and meeting with success, it is only fair to expect that we will also lead to good results when driven forward in the same direction. The two pitches in the bottom of the latter level are set to three men and two men, at 100s. and 110s. per ton respectively, and are worth together 30 cwt. per fm. The pitch in the bottom of the 50 north is set to two men, at 105s. per ton. The pitch in same level south to three men, at 105s. per ton, worth together 2 tons per fathom. The pitch in the bottom of the 46 fathom level north is set to two men, at 105s. per ton, worth 12 cwt. per fathom. The tributaries pay all cost, including 20s. per ton for dressing the ore. We shall sample on Thursday next 25 tons of lead of the usual quality. Workpeople employed as follows:—Miners on tutwork, 17; miners on tribute, 20; trammers and fillers, 5; engine-men and boy, 1; smith and hammerman, 2; Men, boys, and girls on floor, 13; total, 60.

ARTHUR WATERS, Oct. 16: There is no change in the 97 cross-cut west from shaft since my report of Tuesday last. The 86 south looks like making a change for the better shortly. The lode in the 75 south is 4 ft. wide, worth 2 tons per fathom, and likely to improve. Other points as previously reported. We have to-night sent out samples of 25 tons lead ore for sale next week.

EAST VAN.—Wm. Williams, Oct. 15: We have driven 4 fms. upon the cross-course out of the engine-shaft. At the present end we have encountered a breasthead, which we hope to get through in a few days.

EAST WHEAL LOVELL.—Richard Quentrell, Oct. 15: The lode at the shaft at Sevorgan is still improving, and is now worth from 12s. to 15s. per fathom for length of shaft. We are progressing very well in making the lead, &c., for the water-wheel.

GAWTON COPPER.—George Rowe, G. Rowe, jun., Oct. 11: The south lode at the 117, east of cross-cut, is principally composed of capel, spar, and munda, mixed with ore of a kindly appearance for improvement. The lode in the 105, east of cross-cut, is producing stones of arsenical munda, mixed with ore; worth 8s. per fm. The lode in the different stopes working above and below the 105, both east and west of winze, is worth 9s., 10s., and 12s. per fathom respectively. The lode in the 95, east of cross-cut, is showing a kindly appearance for improvement, and producing 3 tons of arsenical munda mixed with ore per fathom. All other points are without change.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, Oct. 14: There is no change to report in the 102 east, on north part of Harvey's lode; it has not yet drained the 90 sufficiently to resume sinking the winze there. We have suspended driving east on the new south lode, and put the men to push on the cross-cut further south; the ground is favourable, and letting out water. The 90 west, on Harvey's north lode, is producing good stones of ore, but the ground is hard. The winze from the 78, before this end, is nearly down to this level; the sinking is suspended until the end is forth under it; the lode in the winze is worth 8s. per fathom. The 90 east, on south lode, is worth about 5s. per fm. The winze on the caunter lode is worth 10s. per fathom. The stopes and pitches throughout the mine continue to turn out about their usual quantities of ore, varying in value from 10s. to 20s. per fathom. We are building boiler-house and preparing to fix another boiler to the pumping-engine, which will be got to work as early as possible. All our points of operation are being pushed on with vigour.

GORSEDD AND MERLLYN.—W. Edwards, Oct. 16: The 70 east level looks better; the vein is wider, and will produce about ½ ton of lead to the fathom; the tributaries are doing better. In the 90 east an important change is taking place; there is more spar in the forebore, with lead intermixed coming in. There is no other change; progress is not very rapid, in consequence of the hardness of the ground, but we shall send off some more lead ore during next week.

GREAT HOLWAY.—Oct. 16: I am glad to say the arrangements with the 22-in. pumps at Bodel's will be complete to-morrow, so that we can then go to work, and trust soon to report good progress. At Gaden shaft we are hoping to meet with another run of lead ore in the sinking, but not until we have operated

mine on Tuesday. Mr. J. Claude Daubuz presiding. The accounts showed a profit on the three months working of 23447.7s. 6d. At the last account the balance against the shareholders was 13,097.11s., and this has now been reduced to 11,134.16s. 3d. The Chairman said the quantity of tin sold since the last meeting had been about the same as in the two previous periods—at the rate of 1000 tons a year; and had the present standards prevailed throughout the quarter their profits would have been equal to a dividend of 12s. 6d. per share. He decided 11½ tons of tin from the mine should be sold at 100s. per ton, and the balance of 13,097.11s. 6d. should be suggested to revert to the period of 13 weeks, in accordance with the original custom of the mine. The committee congratulated the shareholders on the improved position of the mine, and the better prospects of the metal market, and they had confidence that the lessons in economy, in the truer meaning of the word, "good management," which Cornish miners had had to learn in the last few years, would not soon be forgotten. Dynamite, boring-machines, stone-throwing, and perhaps flogging, were the only means of saving tin by the action of the mine. The tin was now found at surface, was even more painful to prevent the loss and waste of tin after it was raised. Mr. Woolcock asked whether there had been any improvement in the mine since the report had been issued, and Captain Nicholas replied that since the sending out of the report they had communicated the 170 fm. level to the winze sinking below the 165 fm. level, and by so doing they discovered a portion of the lode to be standing to the north of the winze, and as much as 100 yds. away from the sinking winze. The 170 fm. level, and the shaft, also improved, so that they were not so much improved since the writing of the report.—Mr. Hosking asked whether they could sink below the 170, as there was a notion abroad that they were down as far as they could go?—Capt. Nicholas said they had about 14 or 15 fms. further to go.—Mr. Hosking then asked how much further west they could sink.

and Capt. Nicholas replied 60 or 80 fathoms.—Mr. Hosking remarked that he was glad to hear it, because it was being industriously circulated that they would go no further in that direction.—The Chairman observed that the Messrs. Henderson, of Truro, had been appointed to dial the boundaries of West Basset and the adjoining mine, which he thought would avoid all disputes and lawsuits. The result of the survey showed that there was a very good margin on either side.

Mr. THOMAS THOMAS,
MINERAL AGENT AND ASSAYER,
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The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 17, 1879.

IRON.	£ s. d.	English, ingot, f.o.b.	£ s. d.
Pig, 60 lb., Clyde.	2 17 3-2 17 6	" refined	98 0 0
" Scotch, all No. 1.	3 2 6-3 12 6	" refined	98 0 0
Bars, Welsh, f.o.b. Wales	10 0 5-10 0 5	Australian	95 0 0
" in London.	6 5 0-	Banco	95 0 0 (nom.)
" Stafford.	6 15 0-7 0 0	Straits	93 10 0
" in Tyne or Tees.	6 0 0-		
Swedish, London.	9 0 0-		
Rails, Welsh, at works.	5 10 0-6 0 0		
Sheets, Staff., in London	8 0 0-		
Sheets, ship, in London	6 0 0-6 10 0		
Hoops, Staff.	7 6 0-7 10 0		
Nail rods, Staff., in Lon.	5 0 0-6 15 0		
STEEL.			
English, spring	13 0 0-19 0 0		
" cut	30 0 0-40 0 0		
Swedish, keg	13 0 0-		
" fag. hain.	15 0 0-		
LEAD.			
English, pig, common	17 0 0-		
" L.B.	17 5 0-		
" W.B. (nom.)	17 5 0-		
" sheet and bar	17 10 0-17 15 0		
" pipe	18 0 0-		
" red	18 5 0-18 10 0		
" white	28 0 0-29 0 0		
" patent shot	19 0 0-		
Spanish	16 15 0-		
NICKEL.			
Metal, per cwt.	18 0 0-20 0 0		
Ore, 10 per cent. per ton	24 0 0-26 0 0		
QUICKSILVER.			
Flasks, 75 lbs., war. (nom.)	8 10 0-8 15 0		
SILVER.			
Silesian	18 15 0-19 0 0		
English, Swansea	19 0 0-		
Sheet zinc	24 10 0-25 0 0		

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more for 10 quoted above, and add 6s. for each X. Terns-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The metal market has continued to display activity, and prices have mostly shown an upward tendency. The speculative feeling which somewhat subsided last week was renewed with considerable animation last Monday, for the activity became more general, and a large speculative business was transacted, which was the means of enhancing quotations to a considerable extent. The elevation of prices which has just been effected is an agreeable change to holders, and it is truly wonderful how much has been done in advancing prices in such an in-credible short space of time. So sudden a movement, however, must materially affect the interests of all parties—the improvement of some, and to the detriment of others. The changes are beneficial to holders, producers, and speculators, but injurious to consumers and shippers, and many dealers have unfortunately considerably suffered from the rapidity of the movement. Regular traders rarely appreciate violent fluctuations, and such extremes as have been lately experienced are exceedingly objectionable. It has yet to be proved that the sudden rise has been occasioned by any sudden increase in the general demand, or that supplies have fallen off in any proportionate extent to justify the rapid rise in prices. By the last returns there was nothing of any importance demanding any particular notice, stocks and supplies remaining much about what they had previously been. It is pretty certain, therefore, that the improvement has not derived its support from this basis, but it must be traced to some other cause. Nevertheless, many are of opinion that the largest figures have been reached, and that they will hereafter show a reduction, and viewing the market in this way they have been led to speculate for the rise.

The full effect of higher quotations on legitimate trade can not as yet be ascertained, and until the speculation now prevailing has reached its limits prices must be considered nominal. The widest fluctuations known for many years have ruled from day to day in several of the leading metals. Hitherto the course of the market has been rapid but a very slight check, and consequently those who bought in anticipation of higher rates must be perfectly satisfied with the result as it stands on paper, but there are many beginning to feel that they would rather contract their engagements than take any additional risks, and considering the speculative character and the immensity of the business transacted, it is but natural that they should feel somewhat anxious with regard to the settlements. A great rise is almost sure to be followed by a fall; as to whether it will be serious or not we will not venture to express an opinion, at the same time we must candidly confess our misgivings as to the due fulfilment of promises passing off without some inconveniences and losses. Under present circumstances it is, therefore, advisable to exercise great caution and circumspection in all contracts. There will in all probability be dearer money, and financing may be rendered difficult, and it would be better to be satisfied with present profits, and if possible to realise them, rather than be carried away by over sanguine anticipations of the future, which may ultimately only saddle them with superfluous and unsaleable stocks. There is, however, not much fear at the moment of prices receding to the level from which they rose, but there is ample room for them to recede, for exorbitant advances can rarely be maintained for any lengthened period, more particularly at the present juncture, when people are unable to bear any extra demands made upon them. The markets have been forced up into a position that the legitimate demands of trade did not warrant, and as in the instance of pig-iron this is clearly demonstrated by the fact that prices were run up to 68s., and since declined to 57s.

COPPER.—During the week this market has been rather excited, and speculators have steadily advanced the value of the metal by 3s. to 4s. per ton, Chili bars having been sold as high as 66s. to 66s. 10s. cash g.o.b., and 67s. for best brands. Yesterday afternoon, however, there was less disposition manifested to operate, and prices began to show a drooping tendency. The sudden rise, although causing a serious check to the shipping trade, has proved very beneficial to holders, as many who have been burdened with stock for some time past have at last been enabled to realise without making sacrifice. Of course, a reaction has been almost anticipated after the great advance. The bi-monthly returns show the statistical position of the metal to be rather more favourable, the total stock of Chili produce in first and second hands in Liverpool and Swansea on the 15th inst. amounting to 28,775 tons, against 30,584 tons at the end of last month. The deliveries are large, being 3429 tons. The supplies, however, continue to come forward rather too freely, and although the figures for both imports and deliveries for the first nine months of the current year are much heavier than those for the same period of 1878, the total difference between the two is very slight, there being this year 24,618 tons, against 23,243 tons in 1878. At the public Ticking, held at Swansea last Tuesday, 1817 tons of ore were sold, at an average of 12s. 3½d. per unit.

IRON.—This market has been very unsettled, and during the week prices for Scotch pigs have shown a downward tendency. Business was done at the earlier part of this week at prices ranging between 60s. and 63s., but later on 57s. was accepted. While the market keeps so irregular prices must be considered nominal, as there is no dependence whatever upon quotations, the market being so extremely speculative. The manufactured trade shows comparatively little improvement,

although in one or two articles a very fair amount of orders have been received, but at present this particular branch of the trade has not undergone any general improvement, as consumers and shippers will only fulfil present requirements, which are limited. Those who bought a month or two back in large quantities may indeed reckon themselves fortunate in having had the turn of the market so much in their favour, and it is but reasonable to look for some reaction. The American demand still continues good, but shipments to most other ports remain limited, and consequently the revival cannot be reckoned as universal. The Middleborough market is reported less strong, and but a limited business is doing. At the opening, however, sellers were firm in their prices last Tuesday, and a considerable advance has been made in the quotations. The chief business that is doing is in warrants. The market is regulated very much by the state of the Glasgow market. Prices are somewhat stiffer, and No. 3 has been offering at 47s., No. 4 for being 1s. to 1s. 6d. per ton less. It is stated that the stock in Connall's stores in this district has been reduced by 11 0 tons during the past week. There are extensive shipments of pig-iron being still carried on; nevertheless, there is a decrease in the total deliveries by 7000 or 8000 tons. There has been a difference in price during the last few days of 7s. or 8s. per ton. This difference is due wholly to the action of speculation. It is thought that there has been some heavy losses incurred by the drooping prices. The decline has been occasioned through speculators suddenly becoming anxious to realise.

There is a rather better feeling existing in the manufactured trade, but the higher prices form a check to legitimate business; nevertheless it is thought that buyers will soon become more disposed to pay the enhanced rates, and thus makers will be receiving increased orders. The Cleveland miners are considering the most prudent course to pursue, as the masters refuse to pay the advanced wages demanded. The iron shipbuilding business seems to be in a slightly more favourable position. The Wolverhampton market is said to be displaying considerable activity. Orders are coming forward in double and treble the quantities they were a short time back, and at much higher limits. Large contracts are made for exportation to South America, and prices are rising, sellers now refusing to book orders at their last issued price lists. The business done at Sheffield may be reckoned satisfactory, the demand both for the raw and manufactured material being very fair, and is daily increasing. Makers appear to believe that there is now no doubt whatever that a permanent revival has commenced. There is a rise of about 7s. per ton in the price of Bessemer pigs, and other descriptions are increasing in value. The demand for railway iron is particularly satisfactory, as large orders are being received from home, continental, and other foreign consumers. Other descriptions, though not receiving quite so much the attention of buyers, are in fair request, with higher prices obtainable.

The Birmingham market is said to be in a very healthy condition, and manufacturers resolved at the latter end of last week to raise their quotation 10s. per ton, and it is thought that ere long a still further rise will take place, nevertheless it is thought that the large stocks now existing will prevent any further vast increase in quotations. It is stated that a decided improvement is perceptible at Newport, clearances from that port to America continuing on a large scale. The Cyfartha Works have been restarted, and others are expected shortly to be set going. Finished iron has experienced a rise in value, and pigs are considerably dearer. There is a slight but gradually increasing improvement to be reported from Leeds. The various forges are receiving more work, and fresh ones are being put into blast. Prices are higher, and the demand is improving, which makes masters anticipate that a general revival has commenced. The Glasgow warrant market has displayed a drooping tendency, and a fair business has been done from 55s. to 60s., the market price to-day being 57s. 3d. to 57s. 6d. per ton.

For the week ending Oct. 11, 1879 Tons 20,544
For the week ending Oct. 12, 1879 Tons 10,382

Increase 10,162
Total increase for 1879 108,322

Imports of Middleborough pig-iron into Grangemouth:—
For the week ending Oct. 11, 1879 Tons 6,880
For the week ending Oct. 12, 1879 Tons 5,648

Increase 1,232
Total decrease for 1879 49,231

In blast Oct. 11, 1879 85
In blast Oct. 12, 1879 93

TIN.—There has been a large business transacted in this metal all through the week, and fully 10s. per ton more than was realised last week has been paid for foreign, contracts having been effected at as high a rate as 95s. 10s. per ton. Prices, however, have been very irregular, and have varied to the extent of 3s. or 4s. per ton in a few minutes, and, therefore, it is impossible to give any positive opinion as to what will probably be the future course of the market. It is reported from Penang that 100s. per ton is the price of Straits, and it is not improbable that the market here will reach that figure. The price of English has risen to 97s. to 98s. per ton.

LEAD.—This market has remained very firm throughout the week, and sellers are realising fully 17s. per ton more for pig-lead than what was obtainable last week. To-day's quotation being 17s. per ton.

SPELTZER is steady, but has not made any further increase in value. There is a very fair demand for ordinary Silesian brands, but that for the English hard is very limited.

STEEL.—There is a moderate business doing, but prices vary only to a very slight extent.

TIN-PLATES.—These are becoming more valuable, owing to the increased price of tin. Quotations are about 9s. or 10s. per box higher than the lowest point recently touched, nevertheless they must be considered nominal, as sellers will not leave them open.

QUICKSILVER.—As we anticipated in our last impression, there has been a sharp advance, and importers successively raised their price by 10s. at a time to 8s. 10s., and at the close they refused to go on at the highest. The business transacted has been of great magnitude.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool, October 15) write:—Since our last report, when we quoted 58s. 5s. to 59s. per ton for Chili bar copper, our market, though experiencing some fluctuations in price, has steadily advanced, and a very considerable business in bars (principally second-hand parcels) has been done at 58s. to 66s. 10s. The demand continues at our present quotation of 66s. to 66s. 10s., and the tendency of the market seems to be upwards. Chili copper charts for the first fortnight of this month have not yet come to hand. Transactions in furnace material have been on the same scale as for bars, and comprise—1100 tons regulus to arrive here at 12s. 3d. to 13s., and 2675 tons spot here, and at Swansea, at 12s. 3d. to 13s. per unit; 90 tons English precipitate at 11s. 10s. 6d. to 12s. 3d.; 1000 tons Spanish precipitate at 11s. 3d. to 12s. 3d.; 1650 tons Mexican ore at 12s. 1½d. to 12s. 9d.; 490 tons New Quebrada ore at 12s. 6d.; and about 300 tons Peruvian ore, spot and to arrive, at 12s. 6d. per unit. At the Swansea sale by tender, yesterday, 1718 tons ore—average produce, 9½ per cent.—realised 12s. 2½d. per unit. For the present no Chili furnace material is available, and as we go to press a cargo of Bolivian ore and regulus, to arrive Swansea, sold at 13s. and 13s. 3d. per unit. The imports of Chili copper during the past fortnight were 1820 tons fine. The delivery during same 3429 tons fine. Arrivals here during the fortnight of West Coast, S.A., produce, from Goodwin, 120 tons bars; T. B. O'Connell, 135 tons bars; Knight Templar, from Pisco, 240 tons ores; Liguria (S.), from Valparaiso, &c., 740 tons bars and 53 tons ingots. At Swansea:—Abercrombie, from Totoralillo, 1137 tons regulus.—Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	906	3515	2,634	—	—
Swansea	906	3515	2,378	—	—
Total	1812	7030	5012	—	—

Representing 21,250 tons fine copper, against 30,584 tons Sept. 30; 23,275 tons Oct. 15, 1878; 17,908 tons Oct. 15, 1877; 14,546 tons Oct. 14, 1876. Stock of copper contained in other foreign ore and Spanish precipitate, 400 tons fine. Stock of Chilian copper in Havre, 4358 tons fine, against 7102 tons Oct. 15, 1878. Stock of Coro Coro barilla in Havre, 225 tons fine, against 2994 tons Oct. 15, 1878. Stock of Chilian copper afloat and chartered for to date, 15,180 tons fine, against 13,000 tons Oct. 15, 1878. Stock of foreign copper in London, chiefly Australian, 5500 tons fine, against 6865 tons Oct. 15, 1878. According to the Board of Trade Returns the total imports and exports into and from this country for the first nine months of the following years were:—

	1877.	1878.	1879.
Copper in ores	12,315	10,114	8,844
Copper regulus and precipitate	11,622	14,997	19,802
Bars, cakes, and ingots	30,520	30,692	34,708
In pyrites (estimated)	13,662	11,206	9,234
Total	68,119	67,009	72,588

	Exports.	Imports.
English copper, wrought and unwrt.	16,106	23,118
Foreign copper, unwrought	10,631	9,440
Yellow metal	12,981	11,208
Total	39,718	43,766

Messrs. FIKLEY and ABELL.—GOLD: Since our last the arrivals have been very small, and as the demand for export has been exceptionally active for America, Egypt, and Germany, no less than 707,000 lb. has been withdrawn from the Bank during the week. Shipments from Hamburg and Havre to the United States, and from Marseille to Alexandria, have also been considerable since the 9th inst. The Maseklyn has brought 52,000 lb. in sovereigns from the Brazil, the P. and O. steamers 17,470 lb. from India, and the Don 15,000 lb. from the West Indies. The vessel leaving Southampton to-day takes 80,000 lb. to Alexandria.—SILVER: The demand for silver continues good, and the price has been firm during the week at 52d. per oz., at which rate the silver by the West India steamer was sold. The market is now bare of supplies, with the exception of amounts held for much higher prices, and in the absence of transactions it is difficult to give a nearer quotation to-day than 52½d. per oz. The Don has brought 32,000 lb. from the West Indies, and the Yecker 10,000 lb. from New York. The P. and O. steamer takes to-day 137,550 lb. to India.

At the Swansea Ticking, on Tuesday, 1817 tons of ore were sold, realising 11,034l. 8s. The particulars of the sale were—Average standard for 9 per cent. produce, 85s. 17s. 7d.; average produce, 9½; average price per ton, 6s. 1s. 5d.; quantity of fine copper, 180 tons 9 cwt. The following are the particulars of the two last sales:—
Date. Tons. Standard. Produce. Per ton. Per unit. Ore-copper.
Sept. 23 255 8 4 9½ 8 3 10s 10½d 254 5 0
Oct. 14 1817 85 17 7 9½ 8 8 12s 10½d 61 2 0
Compared with the last sale, the advance has been in the standard 6s. 9s. 3d., and in the price per ton of ore about 12s. The Caveira ore

gave a produce of 9 15-16th, and sold at 11s. 8½d. per unit; Betts Cove, produce 6 15-16th, per unit 12s. 6½d.; Berehaven, produce 12 7-16th, per unit 12s. 10½d.; Virneberg, produce 13½, per unit 12s. 3½d. There will be no sale on Oct. 28.

The continued rise in metals has caused a great demand for shares in the MINING SHARE MARKET this week, and an almost unparalleled advance in prices has taken place in many. When a buying order reaches the market quotations go up at once, and it is almost impossible to buy; and, on the other hand, when there are orders to sell it is sometimes difficult to obtain quotations, showing that a very large amount of speculative business is going on, and it may take some time for the market to settle down into steady prices; and the fact should not be lost sight of that many of the large tin mines are heavily in debt, and these debts should be cleared off before dividends are declared. That they were ever allowed to accumulate, in some instances when dividends were being paid at the same time, is not very creditable to Cornish mining. The settlement of the fortnightly account occupied the chief attention of the dealers early in the week, and it showed the great extent to which one mine in particular had been "beared."

TIN.—A further advance of 5s. in the standard for ore has caused great excitement in the market for tin shares, and many, it is thought, have been rising too fast on mere speculation. On Monday there had been a fraction, and shares when offered were scarcely saleable at the quotations of the previous Saturday; but on Tuesday another demand set in, and on Thursday shares reached their highest. On Friday the market was much weaker, and shares left off rather sellers than otherwise. Carn Brea have reached 52 to 57½; Dolcoath reached 50 to 55, and leave off 47½ to 50. South Condurow reached 16, and leave off 14 to 15. West Basset have advanced to 9½, 10; at the meeting in Cornwall the accounts showed a profit on the quarter's working of 2344l. 7s., and a debit balance against the company of 11,134l. 16s. The tin sold—241 tons—realised 9261l. 6s. This averaged 38l. 6s. 3d. per ton, as against the previous quarter's sale of 34l. per ton. South Frances do not advance, and leave off 9½ to 10, sellers. Tincroft reached 18, but dropped to 16, 17. East Lovell, 2½ to 3½. West Frances have risen to 13, 15.

East Pools have advanced from 17 to 20, 22. Wheal Agar, 4½ to 5; Wheal Basset, 3½ to 4; Wheal Grenville, 5½ to 5½; Wheal Peevor rose to 18, and leave off 16 to 16½; Wheal Uny, 2 to 2½; Wheal Jane, 4 to 5. At Penhalls meeting the accounts showed a loss on four months working of 127l., and a balance against the mine of 916l. The tin sold realised 2194l. At Blue Hills there was a loss shown of 89l., and a debit balance of 762l. Botallack, 50 to 60; Cook's Kitchen, 2½ to 3; Wheal Kitty (St. Agnes) have reached 24 to 2½. At Killifreth meeting a call of 5s. per share was made. During the four months the debt in the mine had been reduced from 3695l. to 3619l., and 927 relinquished shares had been sold at an average of 3s. to 3s. 6d. each. The tin sold in the four months realised 492l.; arsenic, 22l. The mine is reported to be looking very promising. At Cook's Kitchen meeting, held in Cornwall on Thursday, a call of 10s. per share was made. The debit balance was 3412l.; loss on four months, 1215l. 12s. 5d. At New Cook's Kitchen a debt was shown of 1193l. 7s. 4d., and a call of 5s. per share was made. At West Frances a profit of 12l. 6s. 5d. was shown for four months, and a debit balance of 3629l. 2s. No call was made.

COPPER is still advancing, and a large business is anticipated in copper mines, many of which have been unusually depressed for a long time past. Devon Great Consols have reached 4½ to 5½. Wheal Crebor opened at 4, but as the settlement proceeded it became apparent shares had been heavily "beared," and on Wednesday the prices rose to 5, on Thursday to 5½, and on Friday they opened 5, and leave off 5 to 5½; the latest report values the 120, east of cross-cut, at 80l. to 90l. per fathom. The same level west, 70l. per fathom. The ends are worth altogether 180l. per fathom; stopes, 60l.; total, 242l. per fathom. East Caradon, 1½ to 1½, and in request. Hingston Down, 2 to 2½; Mellanear, 3½ to 4; Marke Valley, 22s. 6d. to 27s. 6d.; Morfa Du, 15s. to 17s. Parys Mountain in good demand at 16s. to 18s. South Caradon, 5s. to 6s.; West Seton, 37½ to 42½; West Tolgus, 24 to 26; East Crebor, 1½ to 1½.

LEAD still advances, and lead mines generally have been buoyant, while some have risen in price considerably. Vans have advanced 21½ to 22½; the sale of lead (200 tons) realised 2412l. 10s.; blende, 217l. 10s. This is an advance in the price of lead of more than 10s. per ton since last sale. East Van, 2½ to 2½; Assheton, 10s. to 12s. 6d.; Roman Gravels opened at 9, and have advanced to 12, 13. There is no particular change in the mine. Clementina, 20s. to 25s.; Denbighshire, 2½ to 3; Glenroy, 7s. 6d. to 12s. 6d.; Gorsedd, 2½ to 3; Great Laxey, 18 to 19; Tankerville has advanced to 6, 6½; the 220 east is improved to 2½, 3 tons per fathom, and the 220 west is opening out a nice ore lode. They are pushing on the new operations at the pump sump, where rich ore ground will soon be opened. East Roman Gravels, 15s. to 20s. (10s. paid); the 75 south is improved to 2 tons per fathom, and likely to be still better. Since this company took possession of the mine in March last they have sold lead and blende, at the late prices, for 1613l., and the labour cost and the merchants bills for same time have amounted to 1653l.

South Darren, 1½ to 1½, and enquired for; the mine is said to be looking well. Pandora, 10s. to 15s.; the stopes continue as good as last week. They are drawing very good ore from stopes in No. 1 winze in new lode, the best that has ever come from the mine. Herodsfoot have been in good demand, and leave off 2½ to 3. Leadhills, 4 to 4½; Minera, 10 to 12; North d'Ersby, 1 to 1½. West Assheton have advanced to 25s., 30s.; the mine has much improved, and will sample 40 tons of lead ore on Wednesday. West Chiverton, 5 to 5½. West Pateley, 2½ to 2½; Pateley Bridge, 15s. to 20s.; West Holway, 1 to 1½; Gwernymynydd, 4 to 4½; Caron, 1½ to 2½; Crosswood, 2 to 1½; Frongoch, 2 to 2½; Grogwinion, 3 to 3½; Hartington, 1½ to 2½; Mawston, 1½ to 2; Red Rock, ½ to 1; South Cwmystwith, 2 to 2½; West Wye Valley, ½ to ½; Wye Valley, ½ to ½; Aberllyn, 10 to 11.

FOREIGN MINES.—Canada Gold, 2 to 2½; Cape Copper, 30 to 31; Colorado, 1½ to 1½; Don Pedro del Rey, 12s. to 14s.; Eberhardt and Aurora, 2½ to 3. Chontales, ½ to ½; the advices this month show a profit of 287l. The gold returned, 395 ozs., yielded 1080l., against a cost of 793l. Advices from Javali show a return of 338 ozs. of gold, valued at 910l., against an expenditure of 900l. New Quebrada, 2½ to 3; Richmond, 8½ to 9½; Santa Barbara, 32s. 6d. to 37s. 6d.; Ruby, 2½ to 2½.

The Market for Mine Shares on the Stock Exchange has fairly maintained the activity noticed last week, but yesterday afternoon and to-day there has been some falling off in the amount of business transacted. This temporary lull has, however, caused no discouragement, as the quotation of 97s. for metallic tin, 70s. for copper, and 17s. for English pig lead affords ample confidence to holders of mine shares. And with regard to lead the prospects are considered to be the more encouraging, inasmuch as telegrams from the United States received this week quote lead in St. Louis at 5½ cents per lb., which at present rate of exchange is over 24s. per ton of 2240 lbs. In consequence of the great general revival of business in America there is every prospect of lead there ruling at high prices for a long time to come. It is estimated that the supply this year will be far below the demand.

Devon Great Consols, 5 to 5½, have been in good demand, and are still being favourably influenced by the continued rise in price of copper; indeed, this affects this mine more than any other in this county, as it sells the largest quantity of copper ores. Some think that there is to be another rise of 15l. to 20l. in copper this year. Wheal Crebor, 5½ to 5½; many well-informed persons are predicting that they will be higher than ever again shortly, as shares are now being bought up for investment.

Among the new companies formed during the week is South Wheal Crebor, with a capital of 40,000l., in shares of 1l. each. The name sufficiently indicates the locality, &c., of the property. The prospectus, which will be found in another column, states that the mining operations, which have recently been prosecuted by private individuals on this site, have been confined, from want of sufficient enterprise, or capital, or both, to delving for ores at shallow depth. On the surface, however, considerable skill, energy, and capital have been expended in the judicious laying out of dressing-floors, &c., and in the erection of shops necessary for a large mine

In full work. It will be seen by reference to the accompanying reports that Mr. John Hitchens, Captain John Goldworthy, formerly manager of Crebor Mine, and Captain Isaac Richards, manager of Devon Great Consols, have all recently inspected South Wheal Crebor, and are unanimous in the opinion that the sett possesses great mineral value, and that judicious exploration only is required to ensure success.

Tredegear Iron and Coal A, 11½ to 11½ dis.; ditto B, 19 to 19½; the number of transactions in these shares has been large, and owing to the steady improvement in the iron trade prices have steadily advanced. Tredegear pig-iron has been quoted within the last few days as high as 72s. 6d. to 75s. per ton, against 50s. to 60s. per ton for Middlesbrough and Glasgow brands, clearly showing the great superiority of the Tredegear over either. The Tredegear Company paid dividends regularly every year except for the one year ending March, 1878. For the year ending March, 1879, they paid 2½ per cent., which must be considered highly satisfactory in a time of such stagnation, and when nearly all similar concerns paid no dividends whatever—some not any for four or five years. The Tredegear Company, moreover, carried forward last time over 20,000l., which is about equal to a 2½ per cent. dividend. The shares have risen 5½ within the last month.

Canada Gold, 2 to 2½; it is reported that in merely opening up the mine they raised in July 11 ozs.; August, 21 ozs.; and September, 67 ozs. The returns are, it is said, being largely augmented as the ground is opened up. The prospects are considered to be of a satisfactory character.

Missouri Lead, 7 to 7½; the company is now reported to be pushing on developments actively. It is understood that the directors have this week sent over to the mines two of the well-known "Eclipse" rock-drills. With lead at 24l. per ton in St. Louis the prospects of the company are regarded as very encouraging.

St. John del Rey, 275 to 280; the latest telegram from the mines at Morro Velho, dated Rio de Janeiro, Oct. 11, states that the produce for September was 34,000 oits., of the value of 13,175l., the ley of the ore being 7 oits. per ton. At Cuibá 200 tons were treated in 15 days, and yielded 2 oits. per ton. Advices dated Morro Velho, Sept. 2, are also to hand. Re-treatment by mill process has been confined to the filling of stamps, where several experiments are being made with sand partly oxidized from exposure. The yield for July was 0.685 oits.; for August, 0.933 oits., which is the highest recovery yet obtained by stamping residuary sand. The aggregate produce for August was 35,060 oits., of the value of 13,585l. 17s. 4d., against which there was labour cost of 41,849 mils., and other charges 43,642 mils., equal to 8550l. 4s. 3d.; leaving a profit for the month of 6525l. 12s. 7d. At Cuibá there was a loss of 138l. 2s. 10d. The work for carrying out the permanent machinery for direct hauling by cages (referred to in the last annual report) will temporarily interfere with the output of mineral, but when completed will greatly facilitate the mining operations, and no doubt largely increase the production. The work of putting down the cages will only involve serious interferences with the vertical haulage for a short period, but some considerable time must, therefore, elapse before the work connected with the mine, underground engine, and the incline haulage can be completed, and the full benefit of the permanent machinery obtained. Don Pedro North del Rey, ½ to ½; the mine captain's report (Sept. 18) states that the ore has been derived from the new lode, and ruled of low quality, being still in crushed ground. The ground surrounding the vein continues in a crushed state, and vein disordered, consequently they have not been able to take out any box-work from it since last advised. Two large pillars of timber built for supporting the roof, and a prop put in under every cap to support same. In Nos. 1 and 2 inclined shafts they have a large force employed to get to the bottom of the mine as early as possible.

Chontales, ½ to ½; the advices (Sept. 5) state that during August 350 ozs. of gold, worth 1080l., was obtained from 1750 tons of ore, or 4½ dwts. per ton. The mine cost was 793l., leaving 287l. profit at the mines. The weather has been dry, but the water from the dam has kept the 24 heads of stamps regularly at work, and everything is going on well. San Sebastian is not looking quite so well, but is in good working order. In Estrella Mine the lode has much improved, and now shows every indication of opening out a good and profitable mine.

Richmond, 8½ to 9½; the usual telegram from the mines at Eureka, Nevada, state that the week's run was \$30,000, from 523 tons of ore, with one furnace. During the week the refinery produced doré bars to the value of \$40,000. The manager (Sept. 23) reports that operations are going on with the usual regularity. The present end of the 600 west drift from South fissure drift is in low grade ore and galena, and is looking very promising. Rise in back of the 600 still looking very favourable. The bottom of the 600 is gradually improving, and according to present indications they are near a large ore body. The ore chambers are turning out the usual quantity of very fair grade ore.

Ruby, 2½ to 2½; advices have been received that already 45 tons of rich ore have been raised from the Dunderberg, and that the tributors had raised 15 tons from the Home Ticket, that the prospects at El Dorado were of a very flattering character, that the drawing machinery had been completed, and that arrangements have been made for carrying out the extensive operations recommended in the reports recently made on the mines. The great rise in the price of lead will enable the Bullwhacker Mine to be opened up at once, and there being any quantity of rich lead in sight at this mine.

In Hydraulic or Gold Washing Companies' shares there has been scarcely any business doing, the contrast as compared with other mining securities being very marked; the quotations remain nominally the same. At Birdseye Creek the blast on Aug. 20 was a "miserable failure." They are making alterations which will facilitate future workings. Blue Tent, 1½ to 2; the manager (Sept. 20) writes that they set off another small blast with 38 kegs of powder on the north side of the pit at South Yuba claim two days previously, with excellent results; the powder drifts for their next big blast are progressing favourably, and will soon be completed and ready to construct the powder-chambers. They used all the available water to good advantage during the whole week.

Hultafall, 1½ to 2; it is reported that "large shipments of ore are being sent forward, and the deposit of lead and blende would appear to be almost inexhaustible."

In Lead Mine Shares there has been a still further increase of business during the week, and in many cases satisfactory advances in price have been established. The gratifying improvement in the American lead trade has been already noticed, and several mines on this side of the Atlantic which suffered severely during the depression can now earn good profits. Llanrwst shares are reported to have been much more largely dealt in, and the opinion is very freely expressed that at present prices every mine now working in the district will yield a satisfactory return for the capital expended upon it if energy and judgment be displayed in its development. Van, 21 to 23; the usual monthly report appears in another column. The mine is looking much about the same. The sale on Thursday last (220 tons of lead and 150 tons of blende) realised 2930l. Tantalville shares have advanced to 8½, 7. A considerable improvement has taken place this week in the bottom levels, as will be seen by the manager's reports, and some further important discoveries of ores are thought likely to take place, to judge from present indications.

Gwernymynydd, 4 to 4½. An important discovery is reported to have been made on Saturday last in the bottom flat at Fron Frowog, and as soon as opened on it was worth 2 tons of lead ore per ton of ground. A new lode has been discovered at the bottom of the mine, which has been let on tribute at 3l. per ton.

Mineral Corporation, 11½ to 12½; the agent reports favourably on the progress made, and adds that the lead is very much better. At Great D'Ereby they have finished all their work in connection with the boring machine, and on Monday the contractors will take charge, to make the final fixtures and start the machine, when they will make good progress with their deep pit.

Frongoch, 2 to 2½; a further sale of 100 tons of lead and 100 tons of blende (in addition to the 150 tons of lead and 100 tons of blende recently sold) will quickly be made, and will, it is stated, be followed by regular monthly sales of sufficient magnitude to return a large profit on the capital. The latest accounts about the mine continue to be of a cheering nature, good discoveries of ore ground are still being made, and the blende ore, which can be worked exceedingly cheap, is much in demand by the spelter merchants, who offer remunerative terms for a lengthy contract. It is understood that this blende ore contains a considerable percentage of silver, which explains the exceptional demand for it at such a high figure, and it is stated that the company have many hundred tons available for the dressing floors, which can be made marketable at a comparatively trifling outlay.

Grogwinion, 3 to 3½; all is reported to be going on well here, excellent ore is being got from the deep levels, and prospects were never better. The increased price of lead will enable good profits to be made. Caron, 1½ to 2½; this mine still opens out in a satisfactory manner; a fair quantity of ore is being got, and good sales are expected to be made at remunerative rates. The capital is small, and, as working is cheap, moderate returns will, it is believed, leave a fair margin of profit.

Wye Valley, ¾ to ¾; the meeting will shortly be held. It is understood that although there is a fine lode, the expenses of working preclude the possibility of profits being made, and the balance-sheet is likely to again exhibit a heavy loss. West Wye Valley, ¾ to ¾; the deep level still looks kindly for an early discovery, and it is hoped that an important change will soon take place. Red Rock, ¾ to 1; these shares have been rather freely offered at a decline. Nothing fresh from the mine this week. Mawston, 1½ to 2; the mine is stated to be looking fairly well, and several important points have to come off before long. Hartington, 1½ to 2; Crosswood, ¾ to 1½; the property has been examined by a well-known mining captain, who gives an encouraging account of it, and speaks well of its mineral resources.

Leadhills shares advanced to 4½ to 4½, and have been in good demand all the week, owing to improvements in the mines and the continued rise in price of lead.

The subjoined is the list of the closing quotations:—
Carn Brea, 55 to 60; Devon Great Consols, 5 to 5½; Dolcoath, 49 to 51; East Caradon, 1½ to 1½; East Van, 2½ to 2½; Gwernymynydd, 4 to 4½; Great Laxey, 18 to 19; Hington Down, ¾ to ¾; Leadhills, ¾ to ¾; Marke Valley, 1½ to 1½; Pateley Bridge, ¾ to 1; Roman Gravel, 1½ to 1½; Tankerville, 6 to 6½; Tincroft, 18 to 17; Van, 22 to 23; West Asheton, 1½ to 1½; West Chiverton, 5 to 5½; Wheal Crebor, 4½ to 5½; Wheal Grenville, 5 to 5½; Almda and Tinto, ¾ to ¾; Birdseye, ¾ to ¾; Blue Tent, 1½ to 2; Canada Gold, 2 to 2½; Cape Copper, 30 to 31; Colorado United, 1½ to 1½; Don Pedro, ¾ to ¾; Eberhard and Aurora, 2½ to 2½; Exchequer, 1½ to 1½; Frontino and Bolivia, 2½ to 2½; Hultafall, 1½ to 2; Javal, ¾ to ¾; Kapanga, ¾ to ¾; New Quebrada, 2½ to 3; Nouveau Monde, ¾ to ¾; Placerville, 2½ to 2½;

Port Phillip, ¾ to ¾; Richmond Consolidated, 8½ to 9; Ruby and Dunderberg, 2½ to 2½.

CORNISH MINE SHARE MARKET.—Mr. JOHN CARTER, Camborne (Oct. 16), writes:—Market has been excited during the week, and prices have risen rapidly. The Tin Standards were raised 5s. on the 15th inst. A large business has been transacted, although the settling (a heavy one) has taken up much attention. At Cook's Kitchen meeting to-day a call of 10s. per share was made, and at New Cook's Kitchen a call of 5s. At West France a small profit was shown on the sixteen weeks' working. Quotations at 4 o'clock annexed:—Botallack, 50 to 60; Carn Brea, 55 to 60; Cook's Kitchen, 3½ to 3½; Dolcoath, 51 to 53; East Caradon, 1 to 1½; East Lovell, 3½ to 3½; East Pool, 20 to 22; Killfret, 5s. to 10s.; Mellanear, 3½ to 3½; New Cook's Kitchen, 3 to 3½; South Condurrow, 14½ to 15½; South Crofty, 8 to 9; South France, 10 to 10½; Tincroft, 17 to 18; West Basset, 10½ to 11; West Chiverton, 4½ to 5; West France, 13 to 14; West Pevor, 4½ to 5½; West Seton, 44 to 46; West Tolgus, 26 to 28; Wheal Agar, 3½ to 4; Wheal Basset, 3 to 3½; Wheal Grenville, 5½ to 5½; Wheal Jane, 4 to 4½; Wheal Kitty, 2½ to 2½; Wheal Pevor, 15½ to 16½; Wheal Uny, 1½ to 2.

—Mr. J. H. REYNOLDS, Redruth (Oct. 16), writes:—The excitement in the Cornish Share Market is still greater than last week, and a further rise in prices has taken place. An advance of 5s. on the Tin Standards took place yesterday (15th). Carn Brea, Dolcoath, West Basset, West France, Wheal Pevor, West Pevor, Tincroft, South France, and Wheal Basset in request at quotations. Annexed are the closing prices at Four o'clock—Carn Brea, 50 to 55; Cook's Kitchen, 3½ to 3½; Dolcoath, 50 to 52; East Pool, 20 to 21; Mellanear, 3½ to 4; New Cook's Kitchen, 3½ to 4½; South Condurrow, 13 to 14; South Crofty, 8 to 8½; South France, 9½ to 10½; Tincroft, 16½ to 17½; West Basset, 10 to 10½; West Chiverton, 4½ to 5; West France, 11½ to 12½; West Pevor, 5 to 5½; West Tolgus, 26 to 28; West Seton, 40 to 45; Wheal Agar, 4½ to 5; Wheal Basset, 3½ to 3½; Wheal Grenville, 5 to 5½; Wheal Jane, 4½ to 4½; Wheal Pevor, 16 to 17; Wheal Kitty (St. Agnes), 2 to 2½; Wheal Uny, 1½ to 2.

INSURANCE SHARES have, according to this evening's report of Mr. W. L. WENN, of the Stock Exchange and Finch-lane, been dealt in as follows: Commercial Union, 18 to 18½; Guardian, 68; Imperial Fire, 154; Ocean, 6½; Rock, 8½ to 8½; Universal, 10 to 10½. There has been a fair business doing in insurance shares, Commercial Union being firm at an advance of 10s., while Universal Marine are easier. For closing prices see list on last page of Journal.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. WENN, of the Stock Exchange and Finch-lane, has been in Bombay (Limited), 6; Gas Light and Coke, A, 179 to 180½; Imperial Continental, 178 to 180; Phoenix New Maximum 7½ per cent., 110; Rio de Janeiro, 26½ to 27½; South Metropolitan, 193½ ex div.; Surrey Consumers, 18½ to 19. Gas stocks are very quiet, and all firmer, especially Imperial Continental, which has improved 1½ per cent. Rio de Janeiro is also 10s. per share. For closing prices see list on last page of Journal.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence; Discovery of Potash Salts (E. Meyer); Safety-Lamps (W. E. Teale); Safety-Lamp Tests (W. E. Teale); the London Coal Supply (W. J. Thompson); the Iron and Steel Institute, in Session at Liverpool (W. J. Thompson); Instantaneous Steam Generator; Rock-Boring Machines for Metallic Mines (G. Rickard); Electric Motive Power; Mount Bischoff Tin Mining Company; Cape Copper Mining Company; Central Railroad Company of New Jersey; the Flagstaff Silver Mining Company; New Quebrada Mine; Colombian Hydraulic Mining Company; the Panulillo Copper Company—A Promising Undertaking; Canadian Mining Notes; Llanidloes District, and Mining Depression, &c.; Treatment of Tin Ores (R. Southey); Metals, Minerals, and Mining (R. Tredinnick); Wheal Crebor and Bodidris; Wheal Crebor (Ekins and Co.); South Crebor (J. Coates); Marke Valley (W. J. Morgan); Bryn Glas Mine (A. Francis); British Silver-Lead Mines (J. L. M. Fraser); a Lost Property. The Scotch Mining Share Market—Weekly Report and List of Prices. Nava de Jadraque; Rio Tinto. Meetings of Public Companies: Linares, Alamillos, Fortuna, &c.

LEAD.—Our anticipations last week as to a rise in the price of this mineral were being actually realised at the time we wrote by the advance of pig lead to 16l.; since then there has been another advance of 1l. per ton, so that mines which have been able to hold back their parcels of ore have been richly rewarded; and even now our advice would be to hold on. As we have already said, the stocks held by smelters have been allowed to fall to a very low limit; and although the consumption of lead is always less in winter than in summer, the general revival in trade which is now taking place must lead to an increased demand. The shares in all good lead mines are in brisk demand, and likely to go up in price considerably before the end of the year; those who followed our advice and invested during the last fortnight will have no cause to regret.

EAST LOVELL.—A special report on this mines has been made during the past week, and is very satisfactory.

DENBIGHSHIRE CONSOLIDATED.—A good improvement is noticed here.

NORTH PENSTRUTHAL AND PENSTRUTHAL.—The circular of the liquidators will be out in a few days, offering all the late shareholders a proportionate interest in the new company to what they held in the old. With the improved price for metals, and the better prospects of the mines, no doubt the shares will rapidly become a favourite investment.

BWLCH UNITED.—The representative of one of the most successful rock-drill firms has visited this week the above mines, to have an interview with the manager, Capt. N. Bray, in reference to their drills, to open out quickly these well-known mines. The lode in the 70, driving east, is getting larger and stronger.

SOUTH WHEAL CREBOR.—This mine, which adjoins Wheal Crebor, is about to be vigorously worked by its proprietors. It has been worked on a rather limited scale by private parties, who extracted about 3000l. worth of copper from shallow workings. The property is intersected by several valuable copper lodes, and has been most favourably reported on by Capt. Isaac Richards, of Devon Great Consols, Mr. Jehu Hitchens, and others. Taking into consideration the proximity of this mine to Wheal Crebor, and the steadily advancing price of copper, it is extremely probable that South Wheal Crebor will prove a most productive and valuable mine.

DUBBY SYKE.—The sinking of the shaft here to prove the Green Hurth vein at present so rich is going steadily on, perfectly free from water, and a sound lead-bearing rock to sink in, believed to be at least 20 fms. in thickness. The small vein passing through the shaft yields samples of lead ore, and the appearance of the mineral improves as they get deeper. Less than a year ago they were sinking under similar conditions to test this vein at Green Hurth (half a mile distant only on the course of the lode from shaft to shaft), the result has been a dividend of 3s. per share, and a mine developed that will last many years. Green Hurth shares were then a drug on the market at 13s. 6d.; they are now 5l., and cannot be got even at this great advance.

CROOK BURN.—The operations at this mine are going steadily on. The shaft is down about 9 fms., and into lead-bearing sills. The latter are laying on the edge (out of usual position), indicating that either the Green Hurth vein or the rich old Providence vein is close to. The sinkers are meeting with more water, which is of course troublesome, but at the same time it is a good indication that the veins will be productive in lead ore when cut into. A lodging-house to accommodate about forty miners is completed, and other works, such as tramway and branch road, are also finished. The utmost confidence in the success of the undertaking is felt in the district of the mine by those best acquainted with its merits.

CARDIGANSHIRE MINES.—The advance in price of pig-lead has drawn attention to the mines of this lead-producing district, which has for some time past suffered from the general depression and low price of the metal. With pig-lead at 17l. many of the Cardiganshire mines can return a good profit, and no doubt many mines will now resume working. That valuable and rich deposits of lead ore exist in this county has long been well known, but great difficulty has for some time past been experienced in obtaining capital to work them, in fact the price of lead rendered it impossible to work many of them at a profit. Now things are changed and the price of pig-lead raised (let us hope permanently), one may expect a return of the activity and enterprise of former years.

COLOMBIAN HYDRAULIC WATER COMPANY.—Some correspondence between Mr. Gray and the directors of the Colombian Hydraulic Mining Company (Limited) appears in another column. In this connection it may be useful to refer our readers to the remarks which were made in the Journal of August 16. We do not know to what extent Mr. Gray assisted in the recent issue of debentures, but we do know that nearly the whole amount issued was subscribed by the directors and their personal friends. Under these circumstances we

think that they may well be trusted to do whatever is best for the interests of all concerned. The settlement of this matter must now remain with those who are personally interested, and we must decline to insert any further correspondence.

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TO PARENTS AND GUARDIANS.
AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling.
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THE ADVERTISER HAS SOME THOUSANDS OF POUNDS WORTH OF INTEREST in what will become a VERY RICH MINE he fully believes. Wishes to meet with a Gentleman to TAKE A PART OF THE INTEREST. He will be let in at cost price, whereby a very large sum will be made without the slightest risk, as the company is Limited. A capital opportunity this. Tin has risen 25 per ton this week, and 27 per ton since Aug. 12. Full particulars from "Mineral," MINING JOURNAL Office, 25, Fleet-street, London, E.C.

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COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF THOMAS EVANS, Esq.,
H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 27th and 28th days of October, 1879, and CANDIDATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMINATION must, on or before the 25th day of October, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
The Wardwick, Derby. WM. SAUNDERS, Secretary.
N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF WILLIAM ALEXANDER, Esq.,
H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 28th and 29th days of November, 1879, and CANDIDATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMINATION must, on or before the 15th day of November, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
135, St. Vincent-street, Glasgow. OLUNY MACPHERSON, Secretary.
N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

CRUSHING MACHINERY.—If any reader would place me in the way of obtaining fullest and best information respecting crushing and pulverising machinery—to pulverise particularly—through the medium of your valuable Journal they will confer a favour. Is there any institute where such models can be seen? I require a powerful, very fine, pulveriser for very hard crystalline minerals, it must be capable of putting through large quantities of stone to pay.—PULVERISER.

Received.—Mr. Geo. Green's letter shall appear next week—"R."—"Veritas" had better apply to a Mining Broker for the information he requires on the system of managing mines in Cornwall—"B. E."—"A.C.O."—"H.T."—"J.H."—"G. J. S."—"H. O. S." We shall at all times be glad of such information—"W. H. C." (Manchester)—"T. B." (Salford)—"J. H. H." (Philadelphia) on Rock Salt Deposits—"Another Shareholder" (Cambrian Mines)—"Shareholder" (Goginan)—"Constant Reader" (Gloucester)—"F. G. S." We could not undertake the publication of such lengthy matter in the Journal; you had better apply to some bookseller—"Observer" on Mining in the Llanarmon District; Next week—"Shareholder" (Derwent)—"Shareholder" (Blue Hills)—"B. O." (Wheal Crebor) should have appended his name and address to his letter: it should then have appeared.

PNEUMATIC MINERAL SEPARATOR.—We have in type an elaborate paper descriptive of a new Dry System of Ore Dressing. Pressure on our space has compelled us to postpone its publication, but it shall appear in next week's Journal.

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, OCTOBER 18, 1879.

SURVEYING IN MINES.

The necessity for having the plans of a mine as accurate as possible is admitted by all mining engineers as of the utmost importance, yet many surveys made have been found to be grossly incorrect. Plans should show the position of faults, heaves, rolls, &c., in the strata, alterations in the quality of the mineral, or its productiveness, and where some of these have not been correctly described serious results have followed. The general use of the magnetic needle underground where the greatest accuracy is required has led to many errors in plans whereby property has been trespassed upon, old works broken into, causing an eruption of water or gas, and loss of life. It is said that even at the present time very many surveys cannot be relied upon within 5 or 10 yards distance from the shafts. An error of half a degree in a line of 10 yards in length would cause an error of 15 yards were the survey continued for the length of a mile. In the county of Durham the theodolite, though a somewhat cumbersome instrument, was principally used, and considered by most practical men to be the most accurate for surveying and for the driving of roads. Surveys by the compass were frequently found to be inaccurate, and we have one instance recorded where two beds of coal worked simultaneously according to the plans, and the result was a difference of several chains. The engineers, of course, were astonished, and the result might have led to costly litigation from coal being taken by the proprietors of the mine which did not belong to them. In another case in driving a tunnel three quarters of a mile in length from shaft to shaft the two levels missed each other by upwards of 10 yards. Accurate and extensive surveys, however, have been made with the compass where marked care has been observed. In one instance in the West Riding of Yorkshire a survey was made with the ordinary compass in driving new roads in the outer side of old workings, and to drive round them, and the two roads met nearly straight. The roads were very steep, about 8 feet wide, and required a good deal of calculation, being driven from opposite directions; yet they met within about 6 inches. HEDLEY's well-known dial is a handy instrument, and one which is a favourite with most mining engineers. It was brought out in 1830, was made for Mr. EMBERTON, the late president of the Midland Institute of Mining Engineers, and is now in use at very many places. But the surveying of mines should be such as would enable the manager to see from his map or plan the very points on the surface below which the mineral had been worked away, and the great object at the present time is as to the best means that could be adopted for effecting that object with the greatest amount of accuracy. As might be expected different engineers favour different instruments to which they have been accustomed, but that does not realise what is most required—undoubted accuracy, simplicity, and quickness, whether by means of the dial, magnetic needle, theodolite, or any other instrument. A new system it appears has been adopted at some places with success. The operation we are told was similar to that of the fast needle, but was accomplished with greater accuracy, and in a much less time. The surveyor walked along with the instrument in his hand, gave out the work to the man to run forward, who gave out the distances, all of which were quickly booked. Then when the forward man was observed the man behind went forward as fast as he could. All this was easily worked, and with little or no error. In what is termed plotting—surveying a protractor was sometimes used, but it was not generally considered equal to what was required, whilst in the North surveys were frequently made with the compass, and not by taking triangles with the chains, and to ensure accuracy they placed an object at each end of the base line of the survey, and the compass in the centre, and so took the bearing of that line. If the two objects were seen through the sight in one line then it was evident that the compass sights were parallel. If on the contrary the two objects could not be seen through the sight in one line then the compass would be incorrect.

It appears that in the German mining schools great attention is paid to accuracy in surveying, and that a survey was only accepted as correct when two independent surveys agreed in the principal results within one link per 50 chains for longitudinal measurement, and one two-thousandth the vertical height in the case of levelling, and from one-half to one-third per cent. for measurements of superficial area or cubic contents. This was stated to be the rule in a paper read at the recent monthly meeting of the Midland Institute of Mining Engineers, entitled "Co-ordinate Plotting," by Mr. JEFFERSON. The paper was a most interesting and valuable one alike to engineers, mine managers, and mining students. He says the degree of accuracy required at the Freiberg Mining University, as alluded to above, could not be obtained by means of the chain and the loose needle, which were the ordinary means of conducting an underground survey. The ordinary 5 in. dial had the circle divided into half degrees, which facilitated the reading of the compass to one-quarter of a degree, and by means of an ordinary process the readings of the compass could be made when great care was taken to one-twelfth of a degree, or five minutes. The error caused by reading the compass incorrectly by the smallest division of a degree—that is, one-twelfth, which might easily occur—amounted to 7½ links in a length of 50 chains, or 7½ times greater than was considered necessary by the Germans for the principal surveys of mines, &c. Any mode, therefore, that could enable them to survey more accurately with the ordinary dial than could be effected by the usual means of using that instrument must be of interest to the mining engineer. The mode adopted by Mr. JEFFERSON to obtain readiness of angles with a much greater degree of exactitude than could be obtained by the usual method of using either the fast or loose needle, was to repeat the reading of the angle from four to six times consecutively, after the manner of using the theodolite. The angle was read off by means of the vernier, the division of which measured the angle to three minutes, or one-twentieth of a degree, and by making use of the device of + and - to denote an angle somewhat greater or less than those given by the vernier, the angle could be read to one minute, or one-sixtieth of a degree—that was, that an angle could be measured with five times greater exactitude than when the vernier was not used. If the angle was measured twice and the mean taken, the angle would be correct to within half the difference between the

two readings, assuming that the correct measurement rested between the two readings. Were three readings made and the average taken a still greater degree of accuracy would be obtained.

Mr. JEFFERSON described what he termed co-ordinate plotting by means of diagrams. In plotting, we are told, the surveyor should always measure from the first station, so that any error in plotting the next one could not be carried forward in plotting the succeeding one. Taking B to be the fourth section in the survey, laying nine chains south and five chains east of the last section D, then the co-ordinates of B with respect to D would be nine chains south and five chains east. Having thus explained the measuring of the co-ordinates of a point, the writer proceeded to show its connection with the ordinary method of plotting, and the mode of using it. By the system adopted it was evident that to obtain the distance of a station north and south of any other station they must multiply the distance by the cosine of the angle of the course, and to obtain the distance of any station east or west of another station they must multiply the distance by the sine of the angle of the course. The advantages of the method were—1. By repeating the readings of an angle several times successively, and taking the average any required degree of exactitude in determining the angle could be obtained, so that in consequence of this repetition the liability of reading an angle incorrectly through inadvertence, &c., was avoided.—2. The position of any station with regard to another could be calculated to one-tenth of a link, whereas the plotting scale could not be used for measuring a single set nearer than one to two links—this over a considerable number of sets might make an important difference. By the method also the position of each station with respect to the starting point being obtained by calculation could be laid down by measurement from the starting point, and any errors in plotting one station are not carried forward to the next, the position of each station being plotted independently direct from the starting point, and, therefore, with much greater exactitude.—3. The protractor only allows of the course being plotted about six minutes, so that the errors under that head are avoided by the system referred to. The disadvantages were—the extra time occupied in surveying, which should not exceed 25 per cent.; the extra time required by the calculation, which was partly compensated for by the greater speed by which the plotting itself could be executed. The mode of surveying was recommended only for the principal roadways of a mine, and in cases where a large amount of exactitude was required. Its value, it may be said, was shown by its universal employment by the certificated mineral surveyors of Prussia and Austria for main surveys.

That repetition measurement has a great advantage over the ordinary mode so far as exactitude was concerned will not be disputed by our engineers, who will find by experience that it will be of good service to them in avoiding danger, and where it is of importance that every excavation should be accurately registered. In illustration of the advantages of repeated readings, the author of the paper gives the results of six successive readings, the difference between each successive reading gives one measurement of the angle, the average of these is taken, and the course of the line (2, 3) calculated from the course of the line. The following is the example alluded to:—

6th reading	336° 47'	} difference 176° 7'	
5th "	160° 40'		
4th "	344° 34'		" 176° 6'
3rd "	168° 29'		" 176° 5'
2nd "	352° 20'		" 176° 9'
1st "	176° 15'		" 176° 5'
Vernier at commencement	4'	" 176° 11'	
		6)1066° 43'	

Average measurement of angle 176° 7'

The system advocated has evidently many advantages over that ordinarily adopted, but in working with the needle there appears to be some ground for believing that it is attracted by the bricks, and that frequently some ironstone is found in the roof, which would also affect it. Those apparently small matters should not be overlooked by those engaged in surveying in our mines.

OUR RAILWAY IRON ABROAD.

The official statistics now available for the first nine months of this year afford substantial and reliable evidence of the revival which has at length taken place in the external demand for our railway iron. Thus the exports of our railway iron in September amounted to 47,722 tons, as compared with 30,075 tons in September, 1878, and 39,485 tons in September, 1877. Substantial as the increase established last month undoubtedly was, it did not, however, altogether make up for the decrease which had accumulated against the exports for the whole year. Thus the aggregate exports to Sept. 30 this year amounted to 347,194 tons, as compared with 349,589 tons in the corresponding period of 1878, and 363,113 tons in the corresponding period of 1877. It appears highly probable, however, that before 1879 has completely run its course the slight decrease still observable in this year's shipments will be completely made good, as the deliveries to the United States in October, November, and December are likely to be relatively heavy. And *apropos* of the United States, it may be interesting here to add that we sent the Americans 8431 tons of our railway iron in September, the corresponding exports in September, 1878, having been just 34 tons, and in September, 1877, nothing at all. The fact is thus conclusively established by official statistics that our exports of rails to the United States have been resumed upon a scale of some importance. In the nine months ending Sept. 30 this year these exports amounted to 22,107 tons, as compared with 625 tons in the corresponding period of 1878, and 1049 tons in the corresponding period of 1877. It seems quite within the bounds of possibility that 100,000 tons of our rails may find their way to the United States before we have reached the close of 1879; and in any case, notwithstanding the enormous duties imposed by the American Congress, our rails have once more regained a market in the great Transatlantic Republic. It may be remarked incidentally that the increase in the demand for our pig iron in the United States has been more rapid than the increase in the consumption of our rails. Thus in September we sent the Americans 32,036 tons of pig, against 1534 tons in September, 1878, and 1151 tons in September, 1877. In the nine months ending Sept. 30 this year the exports of pig were also 76,643 tons, as compared with 20,074 tons and 29,179 tons in 1878 and 1877 (corresponding periods).

To return to railway iron, we may note that the United States now rank seventh this year among our external customers. British India holds the first place, with a consumption of 67,211 tons, as compared with 79,250 tons and 57,411 tons in the corresponding periods of 1878 and 1877. British ranks second, with a consumption of 53,754 tons this year, as compared with 29,707 tons and 30,610 tons. We may remark parenthetically that the Dominion of Canada ought to profit to some extent this year from the prosperity of the United States, and from the good demand which is likely to prevail for the surplus grain of Canada. This may stimulate the construction of Canadian railways, strengthen the credit of the Canadian Government, and generally improve the position of Canada as a consumer of our railway material. Third on the list come the Australian colonies, which have this year absorbed 46,952 tons of railway iron, the corresponding consumption in the corresponding period of 1878 having been 54,049 tons, and in the corresponding period of 1877, 59,342 tons. The Australasian demand for our railway iron will be seen to have declined to a rather serious extent this year. The drought with which the Australasian colonies were afflicted some time since, and the ruinously low rates which have prevailed for wool, have severely affected the pastoral interest of Australasia, and hence the demand for our railway iron on the part of various Australasian Governments has somewhat declined. We say the "demand" on the part of various Australasian Governments, because in Australasia our ironmasters have to deal with Governments and not with companies, all Australasian railways, or nearly all of them, being Government property. Russia has ranked fourth this year as a consumer of our railway iron. The Russian demand has rather sensibly fallen off, having only amounted to 29,586 tons to Sept. 30, as compared with 47,281 tons in the corresponding period of 1878, and 66,780 tons in the corresponding period of 1877. Next to Russia has come Italy

with a consumption of 28,252 tons, as compared with 16,775 tons in the corresponding period of 1878; while Brazil has ranked sixth, with a consumption of 27,910 tons, as compared with one of 14,095 tons in the corresponding period of 1878. Brazil has recently succeeded in raising an internal loan, and her credit has been sensibly strengthened in consequence.

NOTES FROM FURNACE AND CUMBERLAND.

During the past two months considerable improvement has taken place in the hematite iron ore trade of Furness and Cumberland. Throughout the summer a large number of miners emigrated to Colorado, Texas, and elsewhere, owing to the want of employment for them in the mines. Large stocks of ore had accumulated at many mines, and several of the pit owners suspended operations altogether, owing to the limited sale of raw material. The scene has now changed. Iron ore is in good demand, raisers have cleared away a great proportion of the accumulated ore, they have commenced working pits at which operations were suspended, and they are finding employment for an increasing number of miners. The consequence is that emigration has to a great extent ceased, and there are on every hand indications of a continuation of the improved trade now showing itself. Prices have improved 1s. to 1s. 6d. per ton. Average qualities are now fetching from 9s. 6d. to 12s. 6d. per ton at the mines, and it is at these prices that old contracts are being renewed. Puddling qualities of iron ore are being sold at 13s. per ton. In addition to the consumption of iron ore by smelters in the neighbourhood, huge quantities of ore find their way to the east coast—to South Yorkshire and to South Wales. One order for 25,000 tons of iron ore has been completed with the United States, and other orders are in hand for the same country. The ore there is used for producing Bessemer iron for steel making purposes. In Cumberland three large smelting companies, whose works have been standing idle for a few years, have given out orders for a large supply of minerals, and they are about to put their works in operation forthwith. Messrs. Fletcher and Hodgetts, whose pits are situated near Frizington, commenced to work full time on Monday, and the Crosfield Company have now their full staff of miners at work. Many of the pits in Furness are more actively employed than of late. It is stated that the Maryport Company are about to open some new pits at Biggry, which have been proved to contain a vast area of metal. At Kirsanton and at Mouzell several good finds of metal have recently been made, and there are ever and anon new indications of the comparative inexhaustibility of the hematite deposits of Furness and Cumberland. The prospects of mining may be considered very satisfactory in face of the fact that iron and steel manufacturers in the district are sold forward for at least six months to come, and could make still further sales if they were in a position to complete deliveries. Several cargoes of Irish ore have lately been imported into this district for mixing purposes. Some four or five furnaces have also been re-lighted during the last week or two.

GREAT ORDERS FROM AMERICA FOR BESSEMER PIG.—Advices from New York state that a large business has been passing in the capital in English Bessemer pig. Orders have been given out for 50,000 tons at from 5l. 4s. to 5l. 8s. per ton, delivered at New York.

DESTRUCTION OF FIRE-DAMP.—A mining student of Freiberg has invented an improved lamp for the protection of life against explosions of fire-damp. It is based upon the property possessed by ethiops of platinum of condensing on its surface not only oxygen but also light carburetted hydrogen even when only small quantities of it exist in the atmosphere, and in this close contact of the two gases effecting a dark combustion of the carburetted hydrogen. A wire gauze lamp is charged with pieces of pumice stone, impregnated with ethiops of platinum. These lumps are surrounded by coke to protect them, and enclosed in the lamp, which is then ready. In the presence of fire-damp the ethiops of platinum attracts the gas, which is gradually and harmlessly destroyed, the consumption being within the gauze and not of a nature to ignite a surrounding explosive atmosphere. Mr. Körner, the inventor, points out that a great advantage of this safety inflammable air-consuming lamp consists in its not requiring continuous attention and maintenance, as the ethiops of platinum will consume a large quantity of the light carburetted hydrogen without losing its properties. Control of the lamp is effected through the escaping heat. Lamps as described may be advantageously used in all places where there is inflammable air.

IMPROVEMENTS IN COLLIERY WINDING GEAR.—A new system of winding gear known as Koepe's patent, which has already been adopted at many of the collieries in Germany and France, is being introduced at some of the collieries in this country, and Messrs. Nasmyth, Wilson, and Co., of the Bridgewater Foundry, Patricroft, are at present constructing engines and winding apparatus on the principle for the Bestwood Coal Company, Nottingham. The principal feature in the new system consists in doing away with the ordinary drum, and the great weight of rope, which in deep mines is a very great strain upon the engine. In this system the cages are attached, one to each end of the winding rope which passes over the head-gear pulleys and over a winding pulley, which takes the place of the drum, and a balance rope of the same weight as the winding rope is fixed to the bottom of each of the cages, the balance rope hanging freely in the shaft and the lower end being allowed to dip into the sump at the bottom. By this method, however deep the shaft, the ropes and cages are always balanced, and the engine in winding up has only to overcome the weight of the coal in the tubs and the friction of the working parts, a steady engine speed is secured, while considerably less engine power is required, and the risk of over-winding is very much reduced. The system has answered satisfactorily where it has been tried, and is spoken highly of by mining engineers.

SOUTH WALES INSTITUTE OF ENGINEERS.—At a meeting of the South Wales Institute of Engineers at Cardiff, on Thursday, Mr. Jas. McMurkie, of Radstock, was nominated president for the ensuing two years.

THE NORTH WALES COAL FIELD.—A carefully prepared and well executed chromolithographic chart showing plans and sections of the North Wales Coal Field has just been completed by Messrs. J. B. Gregory and Jesse Price, of Mold. The surface area includes from a point about three miles west of Oswestry Station to Mostyn, and takes in a few miles beyond Queen's Ferry on the north, and about the line of Mostyn on the south. The area of the coal field is shown according to the Geological Surveys, with the pits and railways carefully indicated, and there are sections of 48 of the principal pits from Moreton Hall Colliery south of Chirk to West Mostyn, near Mostyn Station, taking the main coal as a datum line, and cross sections from east to west across the Mostyn, Buckley, Brymbo, and Ruabon districts. This principle of arranging the whole of the sections so that a well-known and readily identified seam stands in one horizontal line (without regard to the surface), and adopting a uniform scale of 22 yards to an inch, greatly facilitates comparative references, and will be widely appreciated by practical engineers. Under each seam the depth in yards from surface is given, whilst the thickness of the seam in feet and inches is given on one side, so that all the information required can be at once obtained. The chart will form a handsome ornament for the colliery office, and being published at 30s. on rollers, and 25s. on linen folded, should be extensively patronised.

NICKEL-PLATING.—The recently-erected Nickel-Plating Works at Stockton-on-Tees, owned by the Plating Company (Limited), have so far been a great success. The company have, therefore, this week completed plant to the extent of more than double that which they had, and have brought from their extensive London works additional skilled hands. They now possess at Stockton the largest nickel bath in Great Britain, it being about 15 ft. long, 3 ft. wide, and upwards of 4 ft. deep. The company have booked large contracts with several of the most eminent marine and locomotive engine-builders in the Tyne and Tees districts, who are now having all their engine fittings nickel-plated by this company's patent process. Household goods, such as fenders and fireirons, form a fair

proportion of the company's present contracts, samples of which were exhibited at the iron market at Middlesbrough a fortnight ago.

MINERAL WEALTH OF VICTORIA.—During 1878, 1426 tons of copper ore were raised and 4457 tons smelted; 2627 tons of antimony ores, 22 tons of gypsum, and 188 tons of lignite were raised in the Colony of Victoria, N.S.W.

THE GERMAN JOINT-STOCK COMPANIES.—It is stated that the directors of the Chemnitz Steam Spinning and Machine Company will declare a dividend of 2 per cent. for the past financial year. At the meeting of the directors of the Saxon Machine Works Company at Dresden the other day the declaration of a dividend of 6 per cent. was resolved upon, the profit for the year 1878-9 having amounted to 30,745*l*. These works (formerly owned by Richard Hartmann) are largely engaged in the production of spinning and weaving machinery. The dividend this year compares favourably with that for last year, when only 4 per cent. was declared. In addition to the dividend, 5000*l*. has been written off to the reserve fund. The total amount written off to the depreciation and reserve funds is now equivalent to 44·9 per cent. of the share capital.

REPORT FROM CORNWALL.

Oct. 16.—If matters progress at this rate there will be no knowing where we shall all be in another month. The results of October so far are fairly distancing the most sanguine expectation, and the figure of the tin standards has been touched by the middle which we thought would in all probability be reached by the end. It was clear from the remarks of Mr. Daubuz at West Basset, on Tuesday, that something was in contemplation, but there are very few who will have the boldness to say that they expected that that something would be a sudden rise of 5*l*. It is not too good to be true, but there is the danger that it may be too sudden to be politic. Hitherto, as we have noted elsewhere, we have been spared the evils of undue inflation. It is hardly likely that we shall be able to avoid some of them now. One very amusing thing is to see how completely some of the would-be authorities who have been always predicting annihilation have turned round. We have always held that recovery was only a question of time, and have nothing to recant. Now we turn again to the future.

Since we last wrote mining affairs have undoubtedly been in a very excited, though by no means an unjustifiably excited, state. Not since 1872 has the mining share market been so animated, such good prices realised, or so large an amount of business done. The steady improvement reported by us last week went on increasing until Friday, when the business done at Tabb's Hotel, Redruth, was of a very remarkable and extensive character. Shares were in demand by brokers at prices which a month ago would have been considered fabulous, and the large attendance of mining men generally, and the thoroughly animated nature of the proceedings—the importunity of buyers and the firmness of sellers—recalled the more prosperous days of Cornish mining, and were convincing enough of the revived confidence in the old industry. The improvement is assigned by many not so much to a falling off in the supply of Straits and Australian tin as to the largely increased consumption, the foreign demand being very heavy, and, it is thought, likely to maintain the improved condition of the market for some time. The truth is that both causes have been at work, and that the reduced production abroad is quite as important an item in the calculation as the increased demand. Of course there are many persons coming forward to make known the regret they feel at having parted with their interest in mining some little time ago, when matters were so discouraging, and in one or two well-known cases a sympathetic feeling is expressed towards those who found it necessary to so dispose of their shares. In one instance a recent holder in Carn Brea some years ago purchased a number of shares in the mine at 150*l*. and 180*l*. each, and parted with them some few months ago for the value of the call made on his holding—20*l*. a share.

There are a good many, however, who deserve little sympathy—men who go into mining on the barest modicum of information as a pure speculation, squander their money recklessly, and then wonder that it disappears. We are, as we believe, very far as yet from having reached the top price in store for us, and, therefore, the real danger of the inexperienced at present looms rather in the distance. It cannot, however, be too often reiterated that those who make the most money in mining are those who have the pluck and the wisdom to take advantage of times of depression, who buy when prices are low, and sell when rates rule high. To buy when shares are high and to sell when they are low, as so many have done, and so many more will do, is the sure road to loss if not to ruin, and the thing is really so palpable that it is ridiculous to think of casting the blame upon mining itself. Let it be borne in mind that Cornwall has always had and always will have her periods of depression; but let it be borne in mind also that she has weathered every storm that has attacked her yet. The latest has been in many ways the severest, for it assailed in the fiercest manner the mainstay of our operations—our tin mines. It is over now, and the result should teach everyone that the wisest course when the skies seem to frown is still to retain confidence in the resources of this wonderful county; richer in known mineral wealth after thousands of years of mining than ever before.

We have often written about the wonderful riches that have been revealed in depth by Dolcoath, the pioneer of our deep mines, as an illustration of this. Now we learn that the great south lode has been recovered in the bottom level—the 352—and that it is worth fully 100*l*. per cubic fathom, the actual width being as yet unknown. We have always regarded Dolcoath in this matter as rather a typical than an individual mine, and as affording a proof of the great riches that be hidden in depth—greater by far in all probability than any yet attained.

The step taken at Carn Brea in dividing the banking account between the Messrs. Bolitho and the resuscitated Cornish Bank, in which Capt. Teague is one of the largest shareholders, and of which he is a director, has been followed up more completely at Blue Hills by the entire transference of the account from the Miners' Bank to the Cornish Bank. This is not very much to be wondered at, however, seeing that the Miners' Bank had written to complain of the account being overdrawn 1000*l*., and to say that this must be considerably reduced. The fact that the adventurers had a balance at their London bankers was hardly to be regarded as an excuse for sending the letter to the extent suggested, and under the circumstances the transfer seems to us to have been not only natural but inevitable.

Evidently somebody should institute an enquiry into the mysteries of tin dressing. They are now more obscure than ever. Everybody will recollect that some time ago no less than 18 tons of tin were lost at East Pool Mine. The stamps turned out much less than the samplings indicated, and the dresser could not find how it happened. Now there is a change in the other direction. According to sampling and assay, 246 tons of ore were sent to the stamps and 249 tons came out. There must, of course, be blundering somewhere, and the problem is to find it out. If East Pool has really discovered how to make the process of dressing turn out more tin than is raised from the lode all we can say is that it is the most wonderful discovery ever made in the county. These matters require much closer investigation than they have yet received.

The rumours circulated so industriously of an alleged encroachment by South Frances on West Basset had an authoritative denial at the meeting of the latter mine. The men had heard each other working in both mines, and Capt. James, although assured that, according to his dialling, he was considerably within his own sett, prudently withdrew his men from the spot in order that no risk should be run. One encroachment in a lifetime is enough for any mine, and having already gone through the disagreeable ordeal Capt. James was this time doubly careful that there should be no repetition of it. Mr. Henderson, C.E., of Truro, was called in to dial the ground, and in a subsequently communicating the result to Captain James, that gentleman said, "I have now plotted my dialling of Pascoe's shaft and the stopes above the 185. I make no encroachment nor any approach to it." At West Basset account it was stated that Mr. Henderson had been appointed to keep up the dialling

between the mines at the suggestion of the lord, the result being to show that neither mine is near the boundary on either side.

It is stated that they are going to try the jigg machinery at West Basset. Mr. Claude Daubuz has been to see the machinery erected by Capt. Southey at Wheal Jane, satisfied that it is worthy of a trial, and will give it a trial at West Basset. Mr. J. Hocking, jun., the engineer, and a large shareholder, is of a similar opinion, after a good deal of experience with jigg machinery.

Mr. Roebuck, who bought the Perran Iron Mines the other day, has a large scheme in view. This company intend to make a railway from the Cornwall Mineral Line to Truro to convey iron ore raised in the mines for shipment on the Fal, where blast furnaces are to be built. It is stated that large orders for the ore have been sent from America. It is to be hoped that these anticipations will be realised, for the district is undoubtedly a valuable one.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Oct. 16.—Upon the Iron Exchanges this week in South Staffordshire more disposition was manifested to do business than has been usual for some time past in the week after Quarter-day. Consumers were making numerous enquiries touching the prices of raw and manufactured iron and of coal, and it was evident that there was more real business behind the enquiries than formerly. Buyers who have long remained out of the market are in many cases bent upon replenishing stocks if it is possible to do so without giving much of an advance upon previous quotations. They generally found that a rise of 10*s*. a ton had to be given for medium and common finished iron, and circulars to this effect have been issued by Messrs. G. and W. Underhill, and Messrs. Neve and Sons, of Wolverhampton, the chief iron merchants in this district. Some common iron is up 1*l*. High class iron, the product of the best houses, is to be had at no advance upon old rates, based upon 7*l*. 10*s*. for bars. They are the makers of this description of iron who at present are least benefited by the revival. Common Staffordshire bars are not to be had at less than 6*l*. 10*s*. delivered in Liverpool. Sheets (singles) are not obtainable at under 7*l*. 10*s*. per ton.

Pig-iron makers are in a better position, taken as a whole, than are the manufactured iron makers. The production is increasing with the enlarged demand, and in the Bilston district three furnaces are re-starting. They are owned by the Tame Iron Company, Messrs. Fowler (Bambors Field), and Messrs. Williams Bros. (Parkfield). Foreign brands, particularly hematites produced in the Barrow district and in Wales, have risen more rapidly than native sorts, and this week 80*s*. was asked for hematite iron of Barrow make, and 75*s*. for Tredgar iron. This is a very considerable rise, and little or no business was done at the figure. The operative secretary of the Mill and Forges Wages Board has given the requisite month's notice for a reconsideration of the wages scale.

Before Change closed in Birmingham this afternoon Bulls Bridge singles were quoted at 7*l*. 15*s*. to 7*l*. 17*s*. 6*d*. Best sheets were advanced considerably upon former list quotations. Stamping sheets 3*l*. ordinary sheets 1*l*., and cold rolled sheets 2*l*. per ton. These official advances are due to rapid rise in hematite and similar raw materials, yet medium Staffordshire and Derbyshire pigs closed less strong. Old customers might have bought at 2*s*. 6*d*. under last Thursday's prices. Northampton was offered, and sold well at a slight advance.

The tin-plate makers, who are all full of orders now till the end of the year, have decided to make 23*s*. the minimum selling price for coke plates; the list price is somewhat higher. Sales of tin-plates for Australia and the United States have been on an unprecedented scale during the past three weeks, and as tin is still rapidly rising—21*l*. in the last fortnight—there is every prospect of continued firmness in this department.

Coal is in larger demand than for a long time past, whether reference be had to manufacturing or domestic sorts, and some of our principal collieries are making very large weekly out turns. Prices are better than of late, but there is yet much room for improvement.

The North Staffordshire Iron Trade is in an improved position, and the consignments of finished iron continue to increase rapidly. Messrs. Kinnersley have put their large mills on after a long rest, besides advancing their prices over 10*s*. per ton. The extensive works of Messrs. Robert Heath and Sons have been put on full time, and several large contracts have been signed at a rise of 10*s*., the increased price becoming almost general in the district. The number of colliers who are finding employment is increasing.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Oct. 16.—There has been some little change in the state of trade during the past week, and it is gratifying to state it is for the better. Reports from Cleveland have been to the effect that pig-iron has gone up considerably, and this, of course, has affected the production of the Derbyshire furnaces, so that with an improved demand there has been a considerable increase in the price. Seeing that the pig made at the leading works, such as Stanton, Staveley, Sheepbridge, Renishaw, and other places, is principally made from the ores of Northamptonshire, the quality is, of course, decidedly superior to that made from the poorer, but more abundant, ironstone found in North Yorkshire, and for most purposes the pig is preferred to that of Cleveland, so that our ironmasters have been doing better during the last two or three weeks than for a long time previously. No hematite, however, appears to be made, although there is a large consumption of it at the Bessemer works at Driffield, where vast quantities of rails have been turned out, a good deal going to Russia. The foundries have also become busier, but the mills are still doing what may be called a comparatively moderate business in ordinary castings. At the collieries, not only in the Chesterfield district, but throughout the Erewash Valley, there has of late been more activity, so that the colliery owners have been able to find more employment for the miners. In some instances there has been a slight advance made in the pit prices, but not to the extent of securing anything but the slightest margin of profit. The London trade has also improved so far as regards house coal, and the Midland Railway has been taking a rather heavy tonnage, whilst some of the merchants have advanced their charges to consumers about 1*s*. per ton for what are known as Derby brights, which for several months past have stood at 19*s*. per ton delivered. Steam coal, on the other hand, has not gone off at all well, and the busy season for it may now be said to be closing. Prices have been, and indeed are, particularly low, which has been of great advantage to the railway companies in making contracts for the usual forward deliveries. The improvement which has taken place in the iron and steel trade has led to more being done in coke for smelting, as well as for other purposes.

In Sheffield there has been some little excitement as regards sales of pig, more especially hematites, for which there has been a considerable increase in the demand, so that prices have gone up rapidly, which of course will somewhat seriously affect some of the rail makers who took contracts when the raw iron was 8*s*. or 10*s*. a ton less than it now is. The large order received by Vickers, Son, and Co. for the steel chains for the Firth of Forth Bridge ensures for that firm a long and busy season, which will come at a time when work will be much appreciated by the men. America just now is taking from us a good deal of pig as well as steel, cutlery, and other goods, whilst the transactions with some of our colonies have declined. In heavy armour-plates there has been a tolerably fair turn out for our own Government, whilst ordinary ship and boiler plates have in no way declined. Steel plates, however, are in better request for several purposes, but at the expense of those formerly made of iron. Most of the cutlery houses of note are kept steadily going, but there is no pushing in any department. Files meet with a readier sale, but the manufacturers hold heavy stocks of them, and are more inclined to making a reduction than to go on producing. Edge tools are still quiet, but some of the scissor makers are more fully employed. Silver-plated and Britannia metal goods are more enquired for, and there is a growing increase in the production.

In South Yorkshire coal mining is in anything but a satisfactory state, although most of the miners may be said to be working well. But some hundreds are out on strike, having refused to concede a reduction of wages more or less. At several collieries the men have

been requested to agree to a new list of prices, which would be from 10 to 20 per cent. lower than what they have been working under, and at the meeting of the delegates of the Miners' Association, held at Barnsley, on Monday, the question of limiting the production unless an advance of wages was made was seriously discussed. The panacea of Mr. Macdonald for advancing the price of coal and wages at the same time meets with support from some of the lodges, but there is no doubt but what the great bulk of the men are opposed to it as impracticable. The wages paid to the colliers in the South Yorkshire district are higher than those paid in any other part of the kingdom, and the steady workmen here have no desire to be thrown on the charity of the public. The men at Monk Bretton are still out, and have issued an appeal to the miners and the public asking for support, asserting that they have been asked to submit to a reduction of wages to the extent of from 20 to 25 per cent.

Messrs. Dorman, Long, and Co., of the Westmarch Ironworks, Middlesbrough, have announced their intention to work the Britannia Ironworks, Middlesbrough, during next week. These works employ 1600 hands, but it is anticipated that about 600 may be started. The Skerne Iron Company bought the works some time ago, and carried them on for a short time.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Oct. 15.—There are some signs of improvement in the coal trade. Shipping orders come in more freely, and a slight improvement in the trade, together with an increased demand for house and gas coal, has given an impetus to the home consumption. There is not as yet, however, any advance in prices. The improvement in the slate trade continues, although the men at some of the larger quarries are as yet only making four days a week. A fall of rock at the Braichgoch Quarries in the Corris district has disabled two of the workmen. The explorations at the New Crickheath Lead Mine, near Llanymynech, have been carried forward into some promising-looking ground. Nests and bunches of iron and copper pyrites with blende are now frequently met with. I wish the enterprise success.

Among the new enterprises suggested is that of a railway from Wrexham to Holt and Farndon. Holt is an ancient borough on the Denbighshire side and Farndon a populous village on the Cheshire side of the River Dee. The requirements of the two places are hardly sufficient to justify the construction of a railway, but a tramway worked by horse or steam power might be profitable.

The committee appointed by the Chester municipal authorities to enquire into the cause of the recent destruction of fish in the River Dee report that at the lime-works and mines of Minera works are in progress, which will prevent the pollution of the water of the river from this cause in the future. As the water supply of Chester is derived from the river near the town, notices have been served upon the rural and municipal authorities of the villages and towns lying on the Dee and its chief tributaries to refrain from discharging sewage matter into the stream. Among other places the town of Mold, which is situated on the River Alyn, has received such a notice. This leads to the observation that it is this river that drains what is supposed to be the lead mining region of Llanarmon, and it already receives the drainage of the mines of the Mold district. If the Chester Corporation go on with their work of purifying the Dee, they will find themselves at war with the industrial interests of half of North Wales. If they want, as they do, purer drinking water than they have had hitherto they had better tap the river higher up, and above the almost innumerable sources of pollution to which it, along with most rivers, is necessarily subject.

A movement has been started by Mr. J. Parry Jones, a solicitor in Oswestry, for doing away with the tolls on the Holyhead road. This road was one of Telford's great works, and is one of the best in the kingdom, but since the alteration made in the management of highways, and the abolishment for the most part of turnpike tolls, the charges on this road have become a nuisance and a felt burden upon the local ratepayers, especially upon holders of land. Wales is advancing in sanitary matters, its towns should of course be the best drained and the best supplied with water in the kingdom, and they bid fair to become so. The remote town of Cardigan had its new waterworks opened last week by the mayor, corporation, and Mr. A. W. Szlumper, the engineer. The works comprise a covered reservoir and two miles of cast-iron pipes.

The numerous lead mines under the care of Mr. John Kitto in Montgomery and Cardigan seem to be progressing—Frongoch, Caron, and others are advancing, as I hope, towards good success. Still it is a point for consideration whether beyond a certain point this multiplying of mines under a single management may not be an element of weakness. It may or it may not, according to the degree in which the manager is possessed of administrative ability. The fire-brick and sanitary ware works of the district are now fairly well employed; indeed, this industry may be described as one of the most uniformly prosperous in the district.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Oct. 16.—About four years ago Mr. Edwin James succeeded his father as manager of the Black Vein Pit, Risca—a colliery which is deemed one of the most difficult and dangerous in the district, and he leaves amid the regret of the workmen and his many friends. An explosion has occurred in the Tynwydd Colliery, Rhondda Valley, and the fireman, who was going his rounds, has been killed.

The Royal Commissioners on mining accidents appear to have been busy during their stay in the district. On Wednesday and Thursday last week they took evidence from engineers, colliers, and those at Aberaman House. On Friday Dinas Colliery was visited. The commissioners present were Sir George Elliot, Bart., M.P., Professors Abel, Smyth, and Tyndall, Mr. Burt, M.P., and Mr. W. T. Lewis, with Mr. Wales, Inspector of Mines, and others. On Saturday Professors Tyndall and Smyth, accompanied by Mr. Cadman, H.M.'s Inspector, and Mr. Jordon, as representing the Ebbw Vale Company, visited the old Abercarn Pit, and explored the workings as far as possible.

The house coal men have held a delegate meeting at Hengoed. The proceedings were private; but, apparently, little was done, as an adjournment took place till next Wednesday. One matter put down for consideration was as to a wages advance. As an instance of trade improvement, it may be mentioned that at the beginning of the week the Alexandra Docks, Newport, were unprecedentedly full of vessels; in fact, the officials had more than they could attend to.

The staple trades of the district still exhibit an alteration for the better, and apparently the turn of the tide has set in. Those works which have accumulated stocks of pig and other material are now reaping the advantage; and among them are the Patent Nut and Bolt Works at Cwmbran. It has been already mentioned that a portion of the old Blaena Works had been secured by Mr. Phillips for tin-plate works. Now, it is not known that the furnaces and the remaining unlet property of the Nant-y-Glo and Blaena Company have been secured by several wealthy capitalists, who intend at once to commence operations. One reflection comes in here. While the Nant-y-Glo and Blaena Company's property was under the management of the company itself the shareholders suffered loss; and no changes of directors and managers—and they were frequent—appeared to stem the torrent of adversity. Now the property has passed into the hands of different capitalists, who appear not only to secure an adequate return, but are also enabled to pay good rents to the company. The commencement at Cyfartha will be but small, but it still indicates a move for the better. The demand for finished iron and steel has been fully up to the average, and there is apparently no sign of prices receding from their present improved condition. Bars are also rather more active. Pigs are in good demand, at recent rates, but show an upward tendency in prices. Clearances are tolerably good, the principal being to the United States. A local paper is responsible for the following:—"A gentleman largely interested in the iron trade assures us that three months ago he had much difficulty in selling at fully 25*s*. per ton under present prices; now he can not only sell the whole of his stocks at an advance of 25*s*., but is offered the same price for the whole of the make of his establishment until the end of June next." The Tin-Plate Trade is

also active, and the demand continues good. Prices have gone up to a fair extent, and the Transatlantic enquiry is maintained up to the recent average. As for the coal industry, no alteration of a material character can be reported. There seems to be no doubt, however, that we shall shortly see a change for the better. Colliery proprietors decline to accept present prices for orders for forward delivery; and already, for some of this description, slightly enhanced quotations have been obtained. The output is large, and most of the pits are working steadily. Shipments are large, and during the past week have increased. The demand for steam qualities, especially on foreign account, is good. House coals are also in better request, on account of the colder weather. Patent fuel even is a little more active.

Mr. Edmund Scott Barber, C.E., will be recommended by the finance committee to act as deputy county surveyor during Mr. Bassett's absence from England next winter. Mr. E. S. Barber is the eldest son of Mr. Bassett's late partner, who died at Borneo in 1854, where he was engaged in reporting upon the extensive coal fields of that district. Mr. Barber at the time of his death held several valuable appointments, including the surveyorship of the county of Glamorgan. Mr. E. S. Barber was articled to Mr. Bassett, M.Inst.C.E., in 1862, since which time he has been engaged in several important engineering works, both at home and abroad. His last works were the reconstruction of several very large tanks or reservoirs in Ceylon for the Government, one reservoir alone being capable of containing sufficient water to irrigate from 23,000 to 25,000 acres of land. Mr. Barber was elected an associate of the Institution of Civil Engineers in London in 1873, and elected a member of the Institution in 1878.

At the Cwm Cluk Colliery, near Pontardawe, a first-rate seam of coal, $3\frac{1}{2}$ yards in thickness, has been struck by the enterprising proprietors—Messrs. L. D. and J. Morgan—after several months' working. Beneath the coal is a good seam of fire-clay and shale of very superior quality; the clay is well adapted to the making of pipes and pottery, while the shale is composed of ingredients which will make an exceptionally good common brick.

The Morlais Tin-Plate Works, Llangennech, were offered for sale on Tuesday at the Stepney Arms Hotel, Llanelly, by Mr. S. N. Powell. The sale was attended by Messrs. William Roderick (London and Provincial Bank), A. E. Old (Swansea Bank), William Howell (solicitor), William Williams (Worcester Works, Morriston), Daniel Edwards (Dyffryn), David Morris (Llangennech), William Morris (Briton Ferry), J. Glasbrook (Morriston); Mr. Strick, solicitor, Swansea; and Messrs. R. Thomas and D. Geen, Swansea; W. J. Rees, land agent; Frank Nevill, J. T. Magrath, &c. The bidding was as follows:—Mr. W. J. Rees bid 5000*l.*; Mr. David Morris, Briton Ferry, 6500*l.*; Mr. Geen, 6500*l.*; Mr. W. J. Rees, 7000*l.*; Mr. David Morris, 7000*l.*; Mr. W. J. Rees, 7700*l.*; Mr. David Morris, 7800*l.*; Mr. W. J. Rees, 7800*l.*; Mr. David Morris, 7900*l.*; Mr. Williams, Worcester, Morriston, 8000*l.*; Mr. David Morris, 8100*l.* and 8200*l.*; and Mr. Williams, Worcester, Morriston, was declared the purchaser at 8250*l.*

TRADE OF THE TYNE AND WEAR.

Oct. 15.—The steam coal trade continues very healthy on the whole, but the supply of shipping has not been quite so good this week. Most of the works have, however, been kept fairly going, and the prospect still continues good. It is expected that the demand will continue and improve, and that the time is not far distant when a better state of affairs will prevail both for employers and workmen. A large number of coke-ovens are to be built at the New Hartley Colliery, owned by the Seaton Delaval Company. There is a good demand for best qualities of gas coal, moderate for second class, with an improving tendency. House coals are coming into demand, as is usual at this season of the year, and show an average amount of production at the pits. Prices in this trade are little altered. The enquiry for small coals does not show any falling off; they are in fair demand at late rates. Northumberland small coal is not so much in demand as a fortnight ago. There is a pretty fair demand for coke at late rates.

On Saturday a most important meeting was held at Durham between the committee of the Coal Trade Association and the federation board composed of delegates from the Durham Miners' Association, the Enginemens' Association, the Mechanics' Association, and the Cokemen's Association, for the purpose of re-establishing the sliding scale for the future regulation of wages. The first sliding scale established expired in March last after an existence of two years, and the great strike occurring immediately afterwards, the strained relationship between the two associations caused a renewal of the sliding scale to be abandoned until happier times. At the meeting on Saturday it was agreed that a sliding scale should be re-established, and a document was drawn out and signed by the parties. The new sliding scale, which will come into operation at once, will remain in force for two years, and should either of the contracting parties desire to terminate it, six months notice must be given. The scale has been adjusted, and the particulars published, which have given the greatest satisfaction to all concerned.

The excitement in the iron trade is dying out, and prices have fallen considerably. Sales have been made at various prices, and makers quote nominal rates, but those who want to sell must come down to about 44*s.* for No. 3. It is now clear that a demand, increased to a certain extent, has caused a large amount of speculation. Still, allowing for that an increased demand has taken place, and a price has been reached which will leave a little profit in most cases. Stocks of iron are still large, and this will tend to keep rates down for some time to come, assuming that the demand should continue as at present. An increased price has also been secured for finished iron. Ship plates are 6*l.* 7*s.* 6*d.*; common bars, 6*l.* 6*s.* Foundry iron has also gone up relatively to other iron. Several more furnaces have been put in, and more mills are to be started at Witton Park. The sales of coke in South Durham have not been very large, as consumers are mostly supplied for the remainder of the year. The contracts are generally made in the following year in November or December.

Iron shipbuilding continues to improve, and the orders for new ships will tend to keep the engine-works better employed. It is a favourable sign also that steel shipbuilding on a large scale is being introduced on the Tyne.

PENHALLS.—At the meeting at St. Agnes (Mr. R. Davey in the chair) the accounts showed a loss on the four months' working of 89*l.*, and a total debit balance of 916*l.* 10*s.* Captain Teague asked whether the time had not arrived for considering the amalgamation of Penhalls and Blue Hills.—Captain Rich remarked that at present they were working on the give-and-take principle, and did not see great advantage to amalgamate.—Captains Teague and Bennett were in favour of amalgamation; and Mr. Walter said there was a resolution passed at a recent meeting that it would be advantageous to amalgamate the two mines, if possible, and, failing that, it was decided to give the agents of each mine instructions to work them as one mine as far as practicable.—The Chairman said the two mines ought not to have been separated in the first instance.—Captain Teague said that if amalgamated one engine, if they had a proper site, would keep the water out of the two mines.—Captain Rich did not see why that could not be done now. An engine could be erected, and the two mines could pay the cost between them in proportion to the quantity of tin raised.—Captain Teague did not see how it was possible to work the two mines separately with advantage. Until they had the consent of the lords it was open to them to object to the mines working as at present in conjunction with each other. At present they laid themselves open to have an order to stop at any moment, whilst in case of amalgamation with the lords' consent they could not afterwards object. It was ultimately resolved to make the next meeting special, to forfeit shares in arrears of calls, and to consider the amalgamation.

BLUE HILLS.—At the meeting at St. Agnes (Mr. J. Claude Danhuze in the chair) the accounts showed a loss on the four months' working of 89*l.*, and a total debit balance of 782*l.* 15*s.* The agents (Captains S. Bennett and S. Ryan) reported on the mine, and suggested that the workings on the main level should be resumed now that the price of tin was better. The report was adopted, and a resolution similar to that passed by the Penhalls adventurers in reference to the amalgamation was agreed to.—Captain Teague next proposed that the Cornish Bank should be bankers to the company, and that the adventurers should authorise the committee to overdraw to the extent of 1500*l.*, and after some discussion the resolution was adopted. It appeared that the Miners' Bank had applied that the overdraft balance of 1048*l.* (on which the company is paying interest) should be considerably reduced, as the company had a cash balance of 45*l.* at Roberts, in London, lying idle, and not earning interest.—The Chairman admitted that it was wrong to have a balance in the hands of the London bankers and at the same time be owing money to the local bank.—Captain Teague said that the balance did not exist at the time to which he referred.—Mr. Williams (of the Miners' Bank) said it was odd that the mover and seconder of the reso-

lution for the change were connected with the Cornish Bank as they were. People could draw their own inferences from it. He had his own idea why it was proposed to remove the bank account. Of course, he did not oppose it. Mr. Teague was a large holder, and the resolution could be carried.

MARKET ECHOES AND MINING MATTERS.

The past week has been an extremely busy one upon the market, and a very large business has been done. The settlement last Wednesday was a very heavy one—heavier than for many months past. There has been scarcely a check to the general advance in prices, and high as were those of last week the current ones are considerably higher. Tin shares have again taken the lead. Carn Brea from 48 have further risen to 55, Dolcoath from 40, 42 to 50, West Frances from 94 to 12, Tincroft from 134 to 164, Peevor from 144 to 17, Jane from 4 to 5, Kitty from 30s. to 24, 3. The London market has shown an excited demand for tin all the week, the quotation having advanced to 95*l.*, or 9*l.* above last week's quotation. A further advance in the Cornish standards of 5*l.* per ton has just been announced. To show how enormously tin mines have increased in value some statistics just compiled show that 28 mines have risen nearly 450,000*l.* in two months. In most of the leading lead shares the advance has also been very marked. Roman Gravels are now 12 to 124; last week they were about 9*l.* 10*s.*; Vans are 22*l.*, against 17*l.*; Tankerville 6 to 64, against 44 to 5; and West Chiverton 5 to 54, against 4; whilst Leadhills have risen to 4, 44, from 24. There has also been a better demand for Herodsfoot.

Lead has risen considerably during the past few days, English pigs being now quoted 17*l.* 5*s.* It is authoritatively stated that contracts representing above a million sterling have just been taken by metropolitan building firms. This is good news for lead and blende producers, as the demand for the two metals must be increased thereby.

Copper shares have been chiefly re-represented by Devon Consols, Parys Corporation, West Seton, Crebor, Mellanear, and Marke Valley. All close strong in price, although Parys were as low as 12*s.* to 14*s.* one day this week. They close 15*s.* to 17*s.* 6*d.* What has become of East Roman Gravels, and how is it that there is no quotation for the shares now? When known as West Tankerville they were largely dealt in, but since the reconstruction we do not believe 100 shares have changed hands on the market. We have certainly never ourselves seen a single public transaction in them. Was it wise to change the old name? Scarcely, we think, for whilst not one in a hundred knows East Roman Gravels, nearly every one knew West Tankerville. With such a change as we have in the lead market the shareholders' prospects should have improved. JAMES H. COOPER.

INVESTMENT NOTES.

A further very considerable rise in metals has to be recorded. As predicted last week tin has advanced after the Billiton sale, and the smelters have raised the Cornish standards 5*l.* per ton. The London metal market has been in a most excited state, and it is to be hoped that rash speculation will not force the price to an artificial figure. Lead is firm and steady, and it is believed that the general public have a large interest in lead shares, so that an improvement in this metal is of great importance. Van, which might have been bought last Friday 18*s.* are now 22; Roman Gravels, then 94, are now 12; Tankerville, then 44, are now 6; Leadhills then 24, are now 44. All these shares have been frequently recommended in these Notes, and investors have had opportunities of making good profits. Herodsfoot shares, already mentioned, have also participated in the rise, and are very likely to improve ere long. Price now 24 to 34. Then, again, the very cheapest speculation to be found is North D'Ersby Mountain Mine; the shares can be bought at 20*s.* per share, par. There are few—very few, indeed—bona fide low priced lead shares in the share list now. Many promising mines had to be stopped owing to the great fall in the price of lead. North D'Ersby Mountain Mine is now first in the field on the advance in lead being announced. This advance is likely to be maintained for (it is readily admitted) a long period. A very small outlay of capital will only be required before it is estimated that profits will be made at North D'Ersby. No mine can be more cheaply worked, as it possesses every advantage to be desired. An investor really has a chance of making money rarely offered. No inspector can possibly fail to be satisfied of the value and cheapness of the property. At 20*s.* there is a margin for an important rise in shares, and the capital being only 10,000*l.*, it only requires a profit of 1000*l.* per annum to pay a 10 per cent. dividend.

In tin shares there has also been a very active business, and prices have further advanced. Profits in many mines will be considerably increased. Peevor, Carn Brea, Tincroft, Wheal Kitty (St. Agnes), West Peevor, Wheal Bassett, and others have been in great demand.

Killfirth, which paid dividends when tin was formerly at a better price, is again coming into prominence, and shares are enquired for at 44 to 46. Before the important rise in tin the agents reported that a profitable mine would shortly be laid open. This is far more probable now, and therefore the shares are exceedingly cheap at anything like present price.

In copper mines Crebors have been steadier, and close 47 to 54. Parys Corporation are firmer, and a rise may be expected. The engine has been started at Cathedral Mine, and the water will soon be forked, when some fine copper ground will be opened up. The district is very famous, and a rich mine will, in all probability, be laid open. Shares are a good speculation at 20*s.* to 30*s.*

In the Stock Exchange a very heavy account has just been settled. It is predicted that Mexican, Great Eastern, and North British will be higher. Old Broadstreet, Oct. 17. ALFRED E. COOPER.

THE WEEK.

SATURDAY, OCT. 11.—There was unwonted buoyancy and activity in the markets for a Saturday. Those who had sold stock speculatively seemed nervously anxious to be "even" before "making-up" day (Monday), and to be so they were made to pay. Caledonian advanced from 87 to 94, and British closed 24 higher. North-Eastern, North-Western, and Brighton, A, rose over 1*l.* Great Eastern and Chatham ordinary were wanted, closing prices being 564 and 27 respectively. The American market was very strong, Grand Trunk First rose no less than 34, to 58, and the Second 24, to 26. Reading shares advanced to 87, and the General Mortgage, 1874, to 75. Erie shares closed at 424, and the Second Mortgage at 89.

MONDAY.—Erie shares receded to 414, and the Second Mortgage to 87; but all the other American railways were particularly buoyant. Illinois Central shares, usually so steady, advanced 44, to 89; Pennsylvania shares also closed 82 higher, at 849—both securities having nearly reached par, and British were worked up steadily from a discount of 50 per cent. Business was done in Atlantic and Great Western First at 440. Mexican railway shares rose to 34. Home railroads were very strong at the opening, Caledonian being as high as 1014. Stock was far too plentiful for those wishing to elevate prices further, and in the afternoon large sales were made to avoid onerous contingents. On Brighton, A, Dover, A, Midland, and several others as much as 44 and 46 was paid. Caledonian ultimately receded to 994. Brighton, A, on a good traffic return, was sent up to 1254, but finished below 124. At the close the tone was decidedly dull.

TUESDAY.—Tin mining shares rose materially several of the unwieldy ones not often dealt in, being quoted 54 and 104 higher per share. Several lead shares also had a considerable advance. It is unfortunate for the public that they are only now beginning to buy in earnest. The bulk of holders are not likely to sell much as yet. Leadhills, Van, Tankerville, Roman Gravels, and West Chiverton were all in active demand. Home railways were rather neglected. Great Eastern was the best market, and ultimately closed 14 higher (534), Caledonian improved to par, being a rise of 4. North-Eastern, North-Western, and Midland were very little dealt in, and showed no change at the end of the day. Egyptian Unified, 474 to 474; ditto Preference, 764 to 764. The Deira remained neglected at 62, but a rise here is confidently expected by many. Atlantic and Great Western First Mortgage rose to 414, and Grand Trunk First to 59.

WEDNESDAY.—Atlantic and Great Western First Mortgage at the opening rushed up to 444, closing firm at 444 to 446; the Second rose to 814, and the Third to 894. Reading shares advanced 14, to 2284. Erie were rather neglected, the price having fallen at New York. The settlement was concluded to-day without a failure, which speaks well for the stability of the Stock Exchange, considering the enormous differences that have had to be paid this account to the public. Midland Railway stock was wanted to-day, and quickly advanced 14, to 130. Great Eastern closed at 534, being 44 better. New Zealand Kapunga, 44 to 44. Recovery in prices during the account just concluded far exceeds anything that has been seen this year. At the end of September account Brighton, A, was continued at 1134, and on Monday at 124—a rise of 104; equal to 1054 on every 1000*l.* stock open. In Caledonian the recovery was from 904 to 1004; in Dover, A, from 107 to 114; and in Midland from 124 to 1284. During the same period British rose from 65 to 714; Sheffield from 74 to 81; District from 704 to 76; and Berwick from 134 to 141. After every railway almost had shown a rise on the day a reaction set in, and one or two stocks falling as much as 1 per cent. Atlantic First was exceptionally firm, and touched 474.

Western Mortgage bonds. Yesterday the Firsts were 446, now 550, the Seconds are 327, but could have been got yesterday at 320. Home railways are decidedly flat. Brighton, A, is 1*l.* down at 1224, Dover, A, has receded to 1164, and District to 764. Great Eastern, 574 to 574; Caledonian, 984 to 984. Egyptian, Unified, and Preference are each 44 better. Mining shares keep firm. Leadhills, 4 to 44; Tankerville, 64 to 64; Marke Valley, 14 to 14; Wheal Crebor, 5 to 44; Parys Copper, 34 to 34; Frontino 24 to 24; Don Pedro, 4 to 4; Ruby, 24 to 24; Eberhard, 44 to 44. Four o'clock.—For a short time home railways rallied, but have become flat again, on rumours of large withdrawals of gold. Brighton, A, are offered at 122, after being 123; Dover, A, down to 1154; Great Western have fallen 14, and Midland 14. Great Eastern, 57 to 574; Caledonian, 984 to 984; Chatham Preference, 924 to 93; Atlantic and Great Western First Mortgage are now but 4494, but show a firm front. Consols are unchanged at 974 to 974. Business has been done in Tankerville at 64, in New Quebrada at 3, and in Tincroft at 174. Egyptian Unified has receded to 474, and the Preference to 734. Four o'clock.—A little steadier tone was shown towards the close in railways, but no material recovery was made. Brighton, A, being 122 to 1224; Dover, A, 116 to 1164; Chatham Preference, 93 to 934; District, 74 to 77; and Metropolitan, 119 to 1194. The sum of 445,000*l.* was sent out from the Bank. Atlantic First, 9484 to 9494; Erie, 4414 to 4414; Chelmond, 84 to 9; Flagstaff, 44 to 44; Newport Abercrom Colliery, 44 to 54; Rhipel House, 14 to 14; Cardiff and Swansea, 44 to 1.

FREDERICK R. KIRK.

THE DIAMOND MINES OF SOUTH AFRICA.

An interesting report on the Kimberley diamond mines and others in the district has just been made by order of the Administrator of Griqualand West by Capt. Kitto. He states that the greatest depth of the Kimberley Mine is about 300 ft., of which about 290 ft. is shale impregnated with iron pyrites. The layers are not uniform, some being composed of calcareous shales, others are composed of bituminous shale resembling coal, and other layers are composed of the ordinary indurated clay. The layers are not always parallel, but vary in places at almost every angle. The diamond deposit, bearing no resemblance to anything he has seen in any other part of the world, is about 900 ft. long by 500 ft. wide. The natural composition of the side of the mine is such that disintegration commences almost immediately on exposure to air, and great caution is necessary to prevent the sides caving in on workings and workpeople. The water which drains into the mines comes from the reef, and is lifted by iron tanks drawn by wire rope. The present value of the mine according to the last assessment is 1,313,000*l.*, but that gives little idea of the real value of the property. From the verbose character of Capt. Kitto's report it is difficult to ascertain his opinion, or whether he has any. He believes there are some persons who think the Kimberley Mine cannot be properly worked unless all the claims are combined, but he fails to see the advantage of this to the claimholders.

As to the permanency of the Kimberley Mine Capt. Kitto considers it will continue much deeper than any person of the present generation will care to follow it. In general terms he does not think the proprietors of the claims get an equivalent for their money. The manner in which the debris is tipped appears to be execrable. The long narrow heaps wind snake-like in and out amongst the dwelling-houses and washing-floors, and in many instances afford ample shelter for any thief who wishes to take his neighbour's diamond soil. Kafirs and Kafir huts are mixed with Europeans, and hundreds of heaps of debris conceal the most abominable filth at every turn. He does not think water will be troublesome below the igneous rocks. Capt. Kitto is not sufficiently acquainted with the nature of the country to form an opinion as to the feasibility of getting water for mechanical or other purposes, or of getting cheap fuel to the place. The available labour is the worst he has ever seen; he considers one Brazilian black would do as much work on the average as three Kimberley blacks. He thinks that this state of things might be changed, but a thorough reorganisation would be necessary.

GENERAL REMARKS.—Our markets have been very excited during the week, especially with regard to the English and American railways. There has been some reaction from the higher prices of the former, though some stocks still show a substantial rise for the week. The recent improvement in trade is having its effect on the traffic returns, which though not so satisfactory as might have been expected are decidedly better. American railways of all descriptions have been in strong demand on large buying orders from America, particularly in Atlantic and Great Western bonds, the First Mortgage having risen about 10 per cent.; the reason for this excessive demand is not very clear, as I fancy it will be some time before they are worth their present price. Foreign stocks show no very great changes. Egyptians keep rather dull, the still unsettled state of affairs making holders anxious as to their interest; however, I do not believe there will be any delay in the payment of the next dividend due on the United stock. Mines have been in a very excited state, and a great advance has taken place in many. Parys Corporation, East Caradon, and Herodsfoot in favour of a rise. W. H. H. WATSON, 1, St. Michael's-alley, Cornhill, E.C., Friday Morning, Oct. 17.

HOLLOWAY'S PILLS.—The stomach and its troubles cause most discomfort and bring more unhappiness than is commonly supposed. The thousand ills that settle there may be prevented or dislodged by the judicious use of these purifying pills, which act as a sure gentle anti-acid agent, without annoying the nerves of the most susceptible or irritating the most delicate organisation. Holloway's pills will bestow comfort and confer relief on every headache, dyspeptic, and sickly sufferer, whose tortures make him a burden to himself and a bugbear to his friends. These pills have long been the popular remedy for a weak stomach, for a disordered liver, or a paralysed digestion, which yield without difficulty to their regulating, purifying and tonic qualities.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 16—Van	150	£12 0 0	Mining Co. of Ireland.
— ditto	50	12 5 0	ditto
17—Sentein (1st class)	100	12 9 0	Powis, Carter, and Co.
— do (2nd class)	45	8 19 6	ditto

BLENDE.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 16—Van	75	£3 12 0	Kenrick and Son.
— ditto	75	3 6 0	ditto

COPPER ORES.

Sampled Oct. 1, and sold at Swansea, Oct. 14.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Caveira	85	944	£5 12	Berhaven	102	134	£8 17 6
ditto	85	944	5 11 6	ditto	90	114	7 1 6
ditto	85	944	5 14 0	Virneberg	58	114	7 3 6
ditto	85	944	5 14 0	ditto	56	114	7 3 6
ditto	85	104	6 1 0	ditto	36	124	14 3 0
ditto	85	104	6 1 0	ditto	29	10	5 18 6
ditto	85	104	5 18 6	ditto	19	10	11 3 6
ditto	84	104	5 18 6	ditto	5	94	5 14 0
Betts Cove	108	64	4 8 0	Sobral	67	134	8 13 6
ditto	106	7	4 7 0	Cambrian	28	184	11 14 6
ditto	106	64	4 8 0	ditto	15	204	12 12 6
ditto	106	64	4 8 0	ditto	8	2	4 0 0
ditto	106	64	4 7 0	Copper Silime	2	274	13 17 6
ditto	104	7	4 7 6				

TOTAL PRODUCE.					
Caveira	679	£3950 16 6	Sobral	67	£ 581 4
Betta Cove	634	2757 17 0	Cambrian	51	549 13
Berehaven	192	1542 0 0	Copper Silime	2	27 15
Virneberg	192	1625 1 6			

COMPANIES BY WHOM THE ORES WERE PURCHASED.			
Names.	Tons.	Amount.	
Copper Miners' Company.....	194½	£ 1,055	7 8
Nevill, Druce, and Co.	2	27	15 0
Vivian and Sons	106	555	16 0
Williams, Foster, and Co.	694½	4,507	3 2
Mason and Elkington	340	1,997	10 0
Charles Lambert	43	517	13 6
Sweetland and Co.	363	1,694	0 6
Landore Copper Company	74½	779	2 2
Total.....	1817	£11,034	8 0

NO SALE ON OCT. 28.

TOTALS AND AVERAGES.				
Whole sale	21 cwts. Produce.	Price.	Per unit.	Standard.
1817	94	£8 1 5	12 <i>s.</i> 2 <i>d.</i>	£85 17 7

J. S. MERRY,
ANALYTICAL CHEMIST,
SWANSEA.
SUPPLIES ASSAY OFFICE REQUIREMENTS AND RE-AGENTS.

MR. CHARLES BAWDEN, M.E., ST. DAY, SCORRIER,
CORNWALL,
OFFERS HIS SERVICES TO PERSONS DESIROUS OF INVESTING IN CORNISH MINES.

MEXICO, NEW MEXICO, ARIZONA, UTAH, NEVADA
AND CALIFORNIA.

F. M. F. CAZIN,
MINING AND CIVIL ENGINEER,
AT BERNALILLO, NEW MEXICO, U.S. OF AMERICA.

Has 24 years' experience in Mining and Smelting, and 10 years experience in American Business and Law, offers his services at moderate charges for Reporting on Mining and other Property in any of the above-named States or Territories gives correct, safe, and responsible advice as to securing full titles and possession and, as to best mode of utilising the property, will assist in settling existing difficulties by compromise, and in disposing of developed mining property when held at real value; offers his assistance for securing undeveloped mining properties at home prices. As to care taken in reporting, reference is made to the Mining Journal Supplement, April 1, 1876, containing a report on property of the Maxwell Land Grant and Railway Company; as to technical standing, to the prominent men of the trade—compare Mining Journal of Aug. 30 and Nov. 31, 1872, and New York Engineering and Mining Journal, Feb. 28, 1874.

THE IRON AND COAL TRADES' REVIEW
The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufacture, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general. Offices of the Review: 7, Westminster Chambers, S.W.
Remittances payable to W. T. Pringle.

METALLURGY.

ROYAL SCHOOL OF MINES, JERMYN STREET.—Dr. PERCY, F.R.S., will commence a Course of not fewer than FIFTY LECTURES ON METALLURGY, on Wednesday next, the 22nd instant, at Two o'clock P.M., to be continued on each succeeding Thursday, Monday, Tuesday, and Wednesday at the same hour. Fee for the Course, £4.
F. W. RUDLER, Registrar.

UNITED MEXICAN MINING COMPANY (LIMITED).
Notice is hereby given, that the ORDINARY HALF-YEARLY GENERAL MEETING of Proprietors will be HELD at the office of this company, on WEDNESDAY, the 5th day of November next, at One o'clock precisely. At this meeting the election of an auditor will take place in the room of Jeremiah Carter, Esq., resigned. George Allen, Esq., is a candidate for the vacancy.
The Transfer Books will be closed on the afternoon of the 25th instant, and reopened on the day succeeding the meeting.
By order of the Board, W. M. BROWN, Secretary.
Office: No. 3, Great Winchester-street Buildings, London, E.C., 17th October, 1879.

THE YORKE PENINSULA MINING COMPANY (LIMITED).
Notice is hereby given, that the ANNUAL GENERAL MEETING of the Shareholders of the Yorke Peninsula Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon-street, London, on TUESDAY, the 28th of October instant, at Two o'clock afternoon precisely, for the purpose of transacting the usual business.
The Share Transfer Books will be closed from Monday, the 20th, until Tuesday, the 28th instant, both days inclusive.
By order of the Directors, C. GRAINGER, Secretary.
50, Old Broad-street, London, E.C., 16th October, 1879.

SPAIN AND PORTUGAL.

MR. J. T. JOHNSON, Assoc. Inst. C.E., F.G.S., &c., CIVIL and MINING ENGINEER, late of Chester and South Wales, having joined his Brother, Mr. T. M. JOHNSON, who for the last 13 years has been engaged in Mining in Spain and Portugal, is prepared to INSPECT PROPERTIES and CARRY OUT GENERAL MINING and ENGINEERING WORKS in those countries.
ADDRESS: CORREIO DO CORVO, PORTUGAL.

IRON ORE.

FOR SALE, about 2730 hectares of LAND, with IRON ORE MINES, situated on the Banks of the Rhine. The ore contains, according to analysis, 44-52 per cent. Iron, and 1-045 per cent. Phosphorus. For particulars, apply to the Editor, "St. Johanner Zeitung," Saarbrücken, Prussia.

HORIZONTAL ENGINE, 15-horse power, strong, and well-finished, with fly-wheel, wrought crank shaft 5-in. diameter, and massive box bed; suitable for winding or general purposes; quite new. Price £70.

WINDING ENGINES, pairs of 8 in. and 6 in. ready, with gearing and drum, all complete on one bed plate, suitable for either surface or underground. The nearest, strongest, and most compact arrangement in the market, and very cheap.

BOILERS requiring no brickwork supplied if required.
4-horse power VERTICAL ENGINE and BOILER—the best make.

BENCH DRILLING MACHINE—splendid tool for hand or power; very cheap.

ALEXANDER SMITH,
ENGINEER, DUDLEY, WORCESTERSHIRE.

18 H.P. PORTABLE STEAM ENGINE, with link motion, reversing gear, ready for delivery; also gear to wind and pump.
A 9-h.p. VERTICAL STEAM ENGINE, with link motion, reversing gear (winding drum if required).
A 6-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER, with carriage and travelling wheels.
Apply to
BARROWS and STEWART, ENGINEERS, BANBURY.

22 IN. AIR COMPRESSOR, on massive bed-plate, with slide bars, connecting rods, and crank, FOR SALE (CHEAP).
Improved AIR COMPRESSING ENGINES, with 12 and 9 in. cylinders. Also PAIR of 9 inch WINDING ENGINES complete, with 4 feet drum, geared 3 to 1.
Apply to—
WARSOP and HILL, ENGINEERS, NOTTINGHAM.

FOR MINERAL BORING, SHAFT-SINKING, AND SURVEYING,
APPLY TO
E. J. BEOR, NETHEROP, NEAR CHEPSTOW.

THE SANDYCROFT FOUNDRY AND ENGINE WORKS COMPANY (LIMITED).

NEAR CHESTER
Late the MOLD FOUNDRY COMPANY. Established 1838.)
MAKERS OF
MINING MACHINERY,
CORNISH PUMPING, WINDING, AND EVERY OTHER DESCRIPTION OF ENGINE,
PITWORK, BOILERS, FORGINGS,
WATER-WHEELS, OR CRUSHING, STAMPING, AND DRESSING MACHINERY,
GOLD AND SILVER AMALGAMATING MACHINERY,
MINING TOOLS,
ROCK DRILLS, AIR COMPRESSING ENGINES, and all the necessary accessories for MACHINE BORING.
SPECIAL ATTENTION given to MACHINERY for FOREIGN MINES.
SECOND-HAND MINING MACHINERY FOR SALE.
LONDON AGENT:—MR. JOHN F. PEARSE,
8, QUEEN STREET PLACE, SOUTHWARK BRIDGE, E.C.

THE BIRMINGHAM RAILWAY CARRIAGE AND WAGON COMPANY (LIMITED)

MANUFACTURE RAILWAY CARRIAGES AND WAGONS OF EVERY DESCRIPTION, for HIRE or SALE, by IMMEDIATE or DEFERRED PAYMENTS. They have also WAGONS FOR HIRE capable of carrying 8, 2, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
MANUFACTURERS also of IRONWORK, WHEELS, and AXLES.
EDMUND FOWLER, Managing Director.
WORKS,—SMETHWICK, BIRMINGHAM.

MR. W. F. STANLEY, MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M.'S GOVERNMENT, COUNCIL OF INDIA, SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.
MATHEMATICAL, DRAWING, and SURVEYING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices.
Price List post free.
ENGINE DIVIDER TO THE TRADE.
ADDRESS:—GREAT TURNSTILE, HOLBORN, LONDON, W.C.

THE NORTH WALES COAL FIELD:
Being a series of Diagrams showing the Depth, Thickness, and Local Names of the Seams in the principal Collieries of the various districts, with Index, Geological Map, and horizontal sections across the Ruabon, Brymbo, Buckley, and Mostyn districts.
By JOHN BATES GREGORY and JESSE PRICE,
of Hope Station, near Mold, Flintshire.
Price: Mounted on holland, coloured and varnished, and fixed on mahogany rollers, 30s. each; or in book form, 12x9, mounted and coloured, 25s. each.
May be obtained, by order, of all Booksellers, or direct from the MINING JOURNAL Office, 26, Fleet-street, London, E.C., upon remittance of Post Office Order for the amount.

Just published, cloth limp, price 1s. 6d.,
THE COLLIERY READY-RECKONER AND WAGES CALCULATOR.
By JAMES IRELAND.
"Will be the means of preventing many disputes between pay clerks and colliers."—Mining Journal.
To be had on application at the MINING JOURNAL Office, 26, Fleet-street, E.C.

Wheal Peavor, West Peavor, Wheal Boys, Wheal Prussia, North Treaskerby, West Tolgus, East Pool, South Crofty, Carn Brea, Tincroft, Cook's Kitchen, Dolcoath, West Frances, South Frances, West Basset, Wheal Basset, Penstruthal, Comford, South Condurow, Tolcarne, and all other adjacent and surrounding Mines in the parishes of Camborne, Illogan, Redruth, and Gwennap.

A MAP, showing the present Boundaries, &c., of the above Mines, coloured, but unmounted, for 10s. 6d., or mounted on cloth and rollers for 15s., may be had, carriage free, from the Author, E. SYMONS, 11, Parade, Truro, on his receipt of P. O. Order for the amount.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

PURSUANT to a Decree made in the Cause of BUCKTHOUGHT and Another versus EVANS, the CREDITORS in respect of the PARK OF MINES, in the parish of Saint Enoher, within the said Stannaries, who have not received notice from the Registrar of the said Court that their claims have been admitted, are required on Saturday, the 25th day of October instant, at the hour of eleven o'clock in the forenoon, to COME IN and PROVE THEIR DEBTS before the said Registrar, at his office in Truro; or, in default thereof, they will be peremptorily EXCLUDED from the BENEFIT of the said DECREE.
HODGE, HOCKIN, AND MARRACK, Truro.
(Agents for H. F. Whitefield, St. Columb, Plaintiffs' Solicitor.)
Dated Registrar's Office, Truro, October 13th, 1879.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the OLD TINCROFT CONSOLS MINING COMPANY (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, on Monday, the 27th day of October instant, at Eleven o'clock in the forenoon, at the OLD TINCROFT CONSOLS MINE, in the parish of Towedack, within the said Stannaries, in One or more lots, and subject to such conditions as shall be then and there stated and proceed, all that the INTEREST of the said company of and in the SETT, under which its mining operations have been carried on, together with the WHOLE of the

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS Belonging to the said company, and being within and upon the said Mine, and comprising:—
ONE 24 in. cylinder STAMPING ENGINE, 5 ft. stroke, with fly-wheel and 10 ton boiler, with fittings, complete.
ONE STAMPS AXLE for 15 heads, lifters, cams, and braces, 20 fms. 2½ in. iron flat rods, 4 2 ft. shieves, 4 stands, &c., for same, angle bob with socket piece, stools and top blocks, bishop head, braces at flat rod shaft, 23 9 ft. 7 in. pumps, 1 7 in. plunger pole, with stuffing box and gland, one pole case 9 ft. long, 1 8 in. H piece and top door, 1 7 in. seating, 1 7 in. windbore, 6 and 7 ft. matching pieces, 7 in. bore, about 35 fms. 8 in. pitch pine shaft rods, 4 sets of strapping plates, with bolts and nuts, staples and gland, 4 2 ft. shaft rolls, horse whim, shaft tackle, with 24 ft. shieves at engine shaft, cab wheel, 15 fms. of knocker line, old castings in balance bob, about 30 fms. iron stave ladders in engine shaft, horse whim, shaft tackle and shieves, about 90 fms. of horse whim chain and kibbles, 3 round buddies with gear work, 6 double head frames, with launders and 3 flushets, a quantity of old cast and wrought iron, borer, steel, screwing tools and rests, grinding stone, large beam, scales and stand, and numerous other articles and effects in general use in mines.

The whole of the above-mentioned Pitwork is underground.
For full particulars of which apply to the Official Liquidator of the said company, at the Stannaries Court Office, Truro; and for inspection of the said Machinery, &c., to the Bailiff in charge of the Mine.
HODGE, HOCKIN, AND MARRACK, Truro.
(Solicitors for the Official Liquidator.)
Dated Stannaries Court Office, Truro, October 15th, 1879.

PENHALE WHEEL FOR MINE.

Three miles from Helston.

A PUBLIC AUCTION will be held at these Mines on Thursday next, the 23rd of October, by Mr. H. V. NEWTON, at Twelve for One o'clock precisely, for the purpose of SELLING the whole of the
EXTENSIVE and VALUABLE PLANT thereon, including

ONE 60 in. cylinder PUMPING ENGINE, 11 feet stroke, with THREE BOILERS of 11 tons each. This engine is one of the best in Cornwall.
ONE excellent 40 in. cylinder PUMPING ENGINE, 9 ft. stroke, with TWO BOILERS of 11 tons each.

ONE 30 in. cylinder STAMPING ENGINE, 9 ft. stroke.
ONE 20 in. WINDING ENGINE, with BOILER, 8 tons.
40 fms. of 18 inch pitwork, main rods, strapping plates, bolts, &c.
One first-class cast-iron balance bob, connected to the 60 in. engine.
One 60 feet shears.
One 10 arm capstan, with iron axle.
One 50 feet shears.
One 8-arm capstan.

One 10 ton weighbridge.
Two 18-head stamps axle heads, &c.
One water dry tube, equal to new.
Three pieces of new red pine rod timber, never used, in long lengths.
Whim and fall chains, from ½ in. to ¾ in. diameter, drop screw, pulley blocks, hand screw, grindstone, two excellent smiths' bellows, anvils, and all smiths' tools.
A large quantity of excellent wood sheds.

The whole of the dressing floors and the dressing machinery, ironwork of burning house, wire ropes, pulley stands, launders of various sizes, and a large quantity of materials in general use in mines.
The Auctioneer would specially call the attention of Mine Agents and others to this sale, as the WHOLE IS WANTED TO BE DISPOSED OF.
Polstrong, Camborne, October 14th, 1879.

ADJOURNED SALE OF SILVER-LEAD MINE.
THE SALE OF THAT VALUABLE SILVER-LEAD MINE, called GIBBAS, situated in the ISLAND OF SARDINIA, with the MACHINERY and PLANT thereon, as recently advertised, has been ADJOURNED until Friday, 24th October current, at Two o'clock in the afternoon, within Dowell's Rooms, No. 26, George-street, Edinburgh.
To ensure competition, the upset price has been fixed at £500.
For particulars, apply to JAMES MARTIN, C.A., 49, Castle-street, Edinburgh; or to Messrs. GILLESPIE and PATERSON, W.S., 61A, George-street, Edinburgh, Scotland.

VALUABLE FREEHOLD COLLIERY WITH COAL AND IRONSTONE MINES.

TO BE SOLD, either the WHOLE or PART of LESSOR'S INTEREST in a LARGE FREEHOLD COLLIERY in one of the North Midland Counties, also a LARGE AREA of LEASEHOLD COAL, with power to work thereout as much as possible during eleven years, without any further payment to Lessor.
The coal is of high repute in the London and Southern Markets, and the plant is powerful and efficient, and included in the Lessor's interest, and is capable of raising a minimum of 4000 tons of coal per week. There is ample siding accommodation in connection with the Midland Railway Company's Main Line to London.
The Advertiser would be prepared to CO-OPERATE with the PURCHASER in WORKING the COLLIERY, finding his proportion of Capital for such purposes.
For particulars, apply to Messrs. J. and P. HIGSON, Civil and Mining Engineers, 16, Crown Buildings, Booth Street, Manchester.

TO CAPITALISTS, PROPRIETORS, AND INVESTORS.
TO BE LET, ON LEASE, on easy terms, a MINERAL PROPERTY on "DERWENTWATER BAY ESTATE," KESWICK, CUMBERLAND, known as

SALTWELL PARK LEAD MINE.
It contains a wide lode of quartz, in which blende and lead ores are found, besides other minor lodes, and a copper lode pass through the property.
The rock is Skiddaw slate, the vein shows great promise, and where it is exposed good stones of galena have been broken.
For further particulars, and permission to inspect and see the Mining Engineers' Report, apply to Messrs. BUDD, BOY, and BRODIE, Solicitors, 33, Bedford-row, London; or to Mr. JOHN KERNLISIDE, Land Agent, Keswick.
Dated Oct. 7, 1879.

TO BE LET,—FORGE, SHEET, AND BAR ROLLING MILLS, near WREXHAM, NORTH WALES. Machinery in thorough order; steam and water power; railway communication; coal on the property. Admirably situated for the Liverpool and other markets.
May be viewed, and all particulars obtained of THE LLEY HALL COAL, &c., COMPANY, Cefn-y-bedd, near Wrexham.

IN NORWAY.

TWO MINES, containing, according to analysis, the one 2 and the other 1-25 per cent. NICKEL and COBALT, TO BE SOLD VERY CHEAP. Both mines are very favourably situated near a town, and good loading place.
The quantity of metal ore is, according to appearance, immeasurably great, and the workings very easy.
For further particulars, apply to Mr. T. C. INGENS, Laurvig, Norway.

FOR SALE, a NEW 70 inch cylinder CORNISH BEAM PUMPING ENGINE, 16 ft. stroke in cylinder and 9 ft. in the shaft, with steam case, metallic piston, and wrought gudgeon. The false cover, perpendicular pipes, weigh posts, working and nozzle gear all fitted bright. A strong substantial well made engine, complete, including cast-iron casings for top and bottom nozzles with bright covers, holding down bolts and wrought-iron caps and bolts for connection to main rod.
Apply to WILLIAM'S FERRAN FOUNDRY COMPANY, Portman-square, Cornwall.
Dated Jan. 23, 1879.

FOR SALE, a VALUABLE PROPERTY of about 18 acres in SOUTH WALES, rich in MINERALS, very advantageously situated near several towns, and within a mile of a railway.
For further particulars, apply to POWELL and POWELL, Auctioneers and Estate Agents, Union-street, Bath.

FOR SALE, at NEW PEMBROKE MINE, CORNWALL:—
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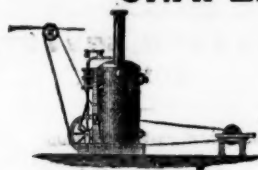
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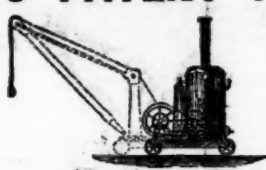
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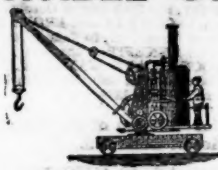
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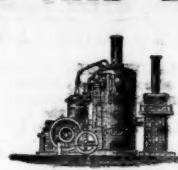
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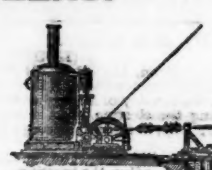
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SILVER MEDAL.

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At the south end of the St. Gothard Tunnel, where

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Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24'90, 27'60, 24'80, 26'10, 28'30, 27'10, 28'40, 28'70 metres. Total advance of south heading during January was 121'30 metres, or 133 yards.

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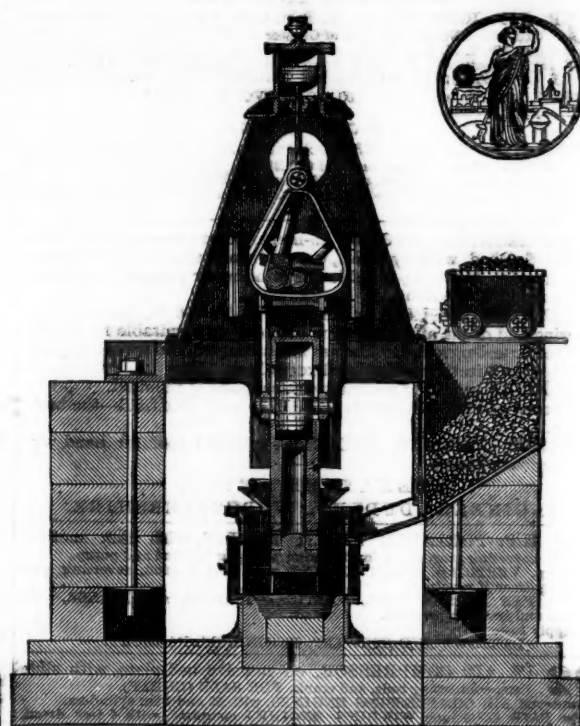
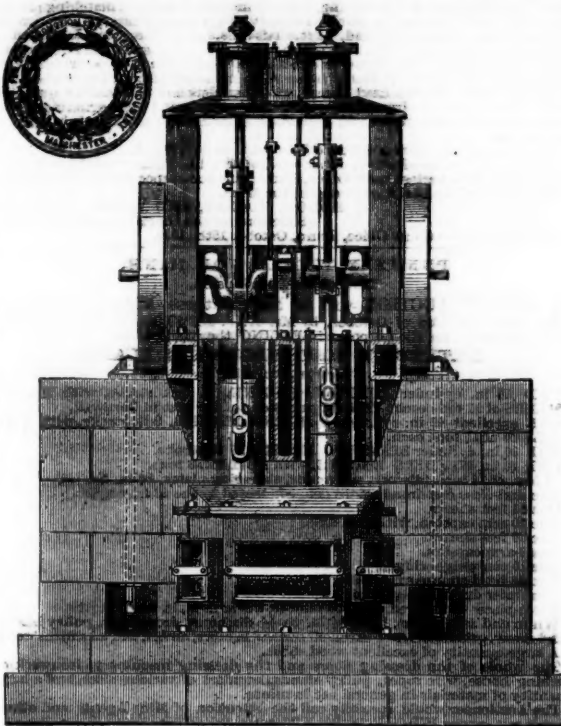
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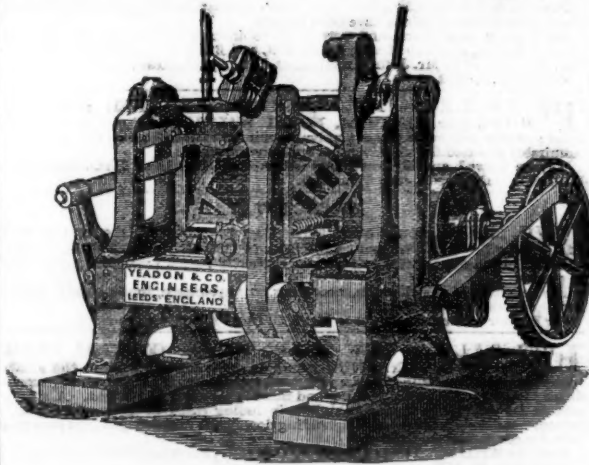
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(Signed)

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Messrs. Yeadon and Co., Leeds.

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G. FAGES, General Manager.

Messrs. Yeadon and Co.,

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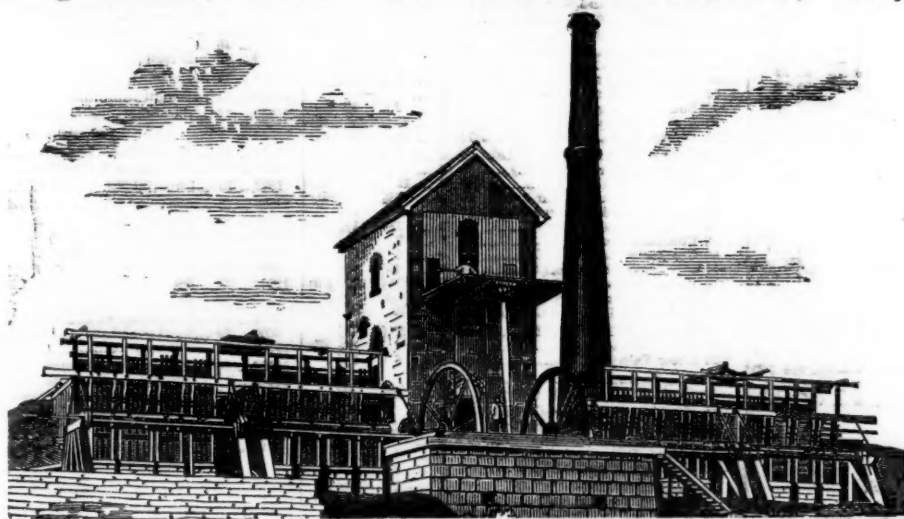
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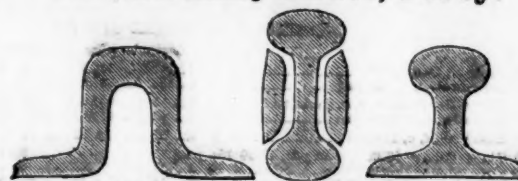
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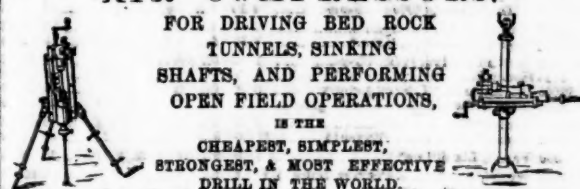
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